

*The Native Orchid Conference
Journal*

ISSN 1554-1169



**Volume 12(1)
Jan-Feb-Mar, 2015**



Volume 12, Issue 1 Table of Contents ISSN 1554-1169

Dichromanthus cinnabarinus Front Cover

Photo: R. A. Coleman

Table of Contents Inside Front Cover

The Harsh World of *Dichromanthus cinnabarinus* (Lex.) Garay Pages 1-5
R. A. Coleman

A Southern Route to *Dichromanthus cinnabarinus* Pages 6-10
R. J. Ferry

Orchid Tales from the North Woods Pages 11-20
T. Nelson

Native Orchid Conference - data Inside Back Cover

Platanthera orbiculata var. *macrophylla* Outside Back Cover
Photo: T. Nelson

The Native Orchid Conference Journal is published four times a year by the Native Orchid Conference, Inc., a non-profit [501(c)3] organization, as a service to its members. The organization is devoted to fostering the study, conservation, and enjoyment of orchids native to North America. Membership dues are: US individual – (\$30), US Family – (\$35), student – (\$15), and non-US Individual or Family – (\$40). Address inquiries about membership, back issues of this journal, and requests for copies of the bylaws to the Treasurer: Jim Hayward, NOC, Inc., P.O. Box 13204, Greensboro, North Carolina 27415-3204, USA; nativeorchids@yahoo.com OR ncorchid@yahoo.com.

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The Harsh World of *Dichromanthus cinnabarinus* (Lex.) Garay

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(all figures are by author)

The southwestern United States, primarily from west Texas to southeast Arizona, is favored with multiple species of orchids more typical of Mexico. These species just barely make it into the United States due to the influence of our summer rainy season, locally referred to as the "monsoons." Many of these species do not occur any place else in the United States.



Fig. 1. *Sotoa confusa* blooms in Big Bend N. Park in late Spring.

A briefly considered alternate title for this article was: "Do Orchids Really Grow in the Desert?" The most common response I get after mentioning that I study wild orchids in the southwest is "How can orchids grow there? It's just one big desert!" The answer is that technically it is *two* big deserts: the Chihuahuan and Sonoran. Within the United States, the Chihuahuan Desert covers parts of Texas, New Mexico, and Arizona. The Sonoran Desert covers parts of southern Arizona and southern California, but with a few notable exceptions such as *Epipactis gigantea*, orchids don't really grow in the desert. Orchid habitat is made possible by the Sky Islands. Sky Island is the term used to refer to mountain ranges poking out of the desert like islands rising out of the sea. A climb up one of the Sky Islands takes the traveler through multiple plant life zones, from deserts of cacti, to pine, fir, and aspen forest, passing through grasslands and juniper and oak woodlands along the way.

The Sky Island providing the impetus for this article is the Chisos Mountain Range within Big Bend National Park in Brewster County, TX. Big Bend National Park is one of my favorite orchid haunts. At least 11 species of orchids grow in the park, and only three of them can be considered common elsewhere. Spring brings orchids such as *Sotoa confusa* (Fig. 1), the now-accepted name for what we used to call *Deiregyne confusa*. Within the United States *S. confusa* is one of our rarest orchids, found only in Big Bend National Park. It was first reported there in 1931, but was not seen again until 2004. Read about the rediscovery of the elusive *S. confusa* in Vol. 3 of the Native Orchid Journal (Coleman 2006). *Hexalectris* species such as *H. revoluta* (Fig. 2) and *H. spicata*, and *E.*

Fig. 2. *Hexalectris revoluta*. Also a late spring orchid in BBNP.



Fig. 2. *Hexalectris revoluta*. Also a late spring orchid in BBNP.

gigantea bloom at about the same time as *S. confusa*. Later in the summer *H. warnockii* (Fig. 3) opens, and near Labor Day we find *Malaxis wendtii* (Fig. 4) blooming in wooded canyons. Like *S. confusa*, within the United States *M. wendtii* is known only from Big Bend National Park. *Dichromanthus michuacanus* (Fig. 5), and the subject of this story, *Dichromanthus cinnabarinus* (Fig. 6) also bloom close to Labor Day.



Fig. 4. *Malaxis wendtii* blooms near Labor Day, about the same time as *D. cinnabarinus*.

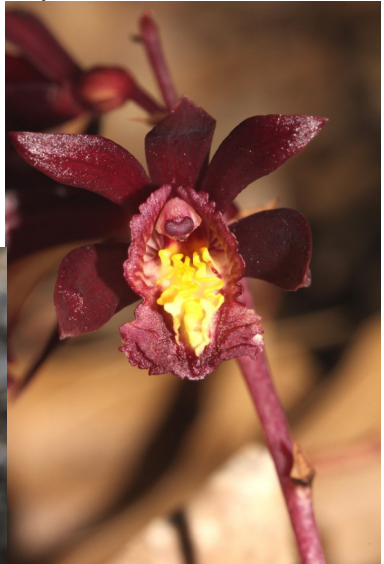


Fig. 3. *Hexaletris warnockii* blooms in the summer.

Hunting for orchids in Big Bend National Park is not for the faint of heart or the out of shape! There are exceptions, but seeing most of the orchids typically requires hiking ten or more miles with elevation gains approaching 2,500 feet from the trailhead. To get a feel for the difficulties of hiking in the Chisos Mountains, read Joe Liggio's tale of his hunt for *D. michuacanus* (Liggio & Liggio, 1999). The National Park Service recommends each hiker carry at least one gallon of water on a day hike, and that is very good advice. Temperatures at the trail head are likely in the mid-

90s (°F), though it is cooler up in the mountains. Sun protection is a must. Wise hikers check weather forecasts to determine if they should also carry rain gear, especially during the monsoon season. Hikes often take all day so food is a good idea, and you probably want to carry your camera equipment. I actually stopped taking a tripod because it weighs as much as two quarts of water, and I'd rather have the water.

I was hiking in Big Bend National Park on Labor Day weekend, 2014, looking for orchids with my two adult sons, Joel and Troy. They had grown up hunting orchids in California, Arizona, and New Mexico, but this was their first time on an orchid hunt in Texas. We were in about five miles and I had been telling them what to look for in terms of leaf size, height of plant, and so on. Reflecting back on their California experiences Troy said "All these things are tiny and green and hard to see. Why can't we ever hunt for a big orange orchid?" Precisely at that



Fig. 5. *Dichromanthus michuacanus* blooms at the same time as *D. cinnabarinus*, but is even more difficult to reach.

time I said: "How about this one?" We had just walked up to *D. cinnabarinus*.

Dichromanthus cinnabarinus is both big and orange. Some might call it reddish since the adjectives scarlet and vermilion are used to describe it, but to me it is orange. Luer (1975) shows it ranging from southern Mexico with its northern terminus just barely getting into the United States in the Big Bend area of Texas. Liggio and Liggio 1999 say it grows in three mountain ranges in Brewster County, TX: the Chisos, Glass, and Del Norte Mountains.



Fig. 6. *Dichromanthus cinnabarinus* has bright orange tubular flowers.

Dichromanthus cinnabarinus and *D. michuacanus* are what I call "monsoon orchids." They do not come up until about the time of the summer rains. Spikes of *D. cinnabarinus* elongate through the summer and flowering starts in late August. Blooming is sometimes delayed until closer to September depending on the onset of the rains. Four or five strap-like leaves up to 12 inches long, slightly longer on robust specimens, are at the base of the plant. Flower spikes on large specimens approach 36 inches tall, with a cluster of 30 or more tubular orange flowers at the apex, each about one inch long.

Tall bright orange native orchids are fairly rare in the United States outside of Florida. But what makes *D. cinnabarinus* perhaps more unusual is its habitat. It grows between 6000 and 7000 feet elevation on hillsides and at the crest of hills in full sun (Fig. 7). The leaves are sometimes protected by surrounding shrubs, but often the plants are fully exposed to the sun. The orange heads of flowers standing above the desert scrub is a transfixing sight (Fig. 8).



Fig. 7. The sun baked harsh habitat of *D. cinnabarinus*.

Once you have climbed and hiked the five or six miles to the area, some

cross country scrambling remains to get to where you can see the flower spikes in the scrub. It is a perilous trek from where you can first see them to where the

plants are. The scrub community abounds with companion plants such as *Agave*, *Sotol*, and *Yucca* species. *Agave lechuguilla*, commonly called shin dagger, threatens your every step. Yuccas and cacti poke the unwary hiker. *Sotola* species can serrate the unprotected skin. Rock outcrops create a dangerous walking surface and boulders must be dodged. There are few tall shrubs, and no trees. It is hot, dry, rocky, and just about everything sticks you, but that is where these orchids grow (Fig. 9).



Fig. 8. It's always inspiring to find *D. cinnabarinus* peeking above the desert scrub.

A few plants grow in canyons within the park, but the habitat is equally as challenging as the open hillsides. Of particular interest are the plants Joel, Troy, and I had just come upon. They were at the base of a rock wall in full sun. One of the plants was coming up under an *Opuntia* species, commonly referred to as prickly pear (Fig. 10). The orchid's leaves were entwined with the *Opuntia* pads and the flower spike twisted and turned its way up through

the arms of the cactus. This is hardly the habitat that first comes to mind when thinking of temperate zone terrestrial orchids in the United States. I have often seen and photographed southwestern orchids near cacti and agaves. However this is the first time I've seen an orchid growing directly at the base of a cactus.



Fig. 9. This open, dry, rocky terrain is where *D. cinnabarinus* grows.



Two thoughts occurred to me as we stood there communing with the orchid. First, it was worth 10 miles of hiking and 2,500 feet of elevation gain to see this. Second, I may have to carefully restate my position on orchids growing in the desert.

Fig. 10 Left. *Dichromanthus cinnabarinus*. Plant growing in bright light partially shaded by an *Opuntia* species.

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A Southern Route to *Dichromanthus cinnabarinus*

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As the Mexican Eagle flies, it is due south from Ron Coleman's site of *Dichromanthus cinnabarinus* in the Big Bend area of Texas to the small town of Laguna Sanchez, Mexico. However, via automobile from Victoria, Texas to the same Mexican town becomes a much more circuitous route. One proceeds west to the small Texas town of Gorge West and then due south to McAllen, on the border and across the Rio Grande to Reynosa, Mexico. From that point it's a southwesterly drive into Monterrey, Mexico. After a short jog slightly southeast to Allende it's a westerly route into the high elevations of the Sierra Madre Oriental. Within a few miles we pass through the well-known Horsetail Falls, on the eastern slopes of the Range. This range divides the Mexican lowlands and extends northward into Texas and New Mexico. Around Conoco, NM and the Santa Rita Mine, the mountains bifurcate with a small finger extending westward into Arizona and the main body continuing north beyond Albuquerque, NM. We have different names for the mountains in the U.S., but seen from the high altitudes of a jet aircraft they remain one magnificent continuous range (Fig. 1).



Fig. 1. The AZ-NM-TX & Mexican area with land route from Victoria to Laguna Sanchez, Mexico. Digital photo courtesy of Google Earth. Fri-26Dec-14.

In late September, 2009, when travel from southern Texas hundreds of kilometers into Mexico was not at risk of one's life, your editor, with his wife and a neighbor Trudy, drove to Monterrey, Mexico. There we met with Salvador Contreras Arquieta, the son of longtime close friend the late Dr. Salvador Contreras Balderas, and your editor's major professor during doctoral studies several years ago.

The next day we passed the Horsetail Falls area, and drove west, up into the Sierra Madre Oriental on the Laguna Sanchez highway. Here, the word "up" is very appropriate, and the elevations are more accurately given using the metric system (for those firmly wedded to the archaic English system, there are 39.37 inches to a



Fig. 2. Trudy surveys the area from which we had come (at this point, the ravine is about 1,500 feet down, and the town lower.) Digital photo 3171 Sat-26Sept-09.

meter). We were soon at elevations of over 1,200 meters (Fig. 2), and we would

pass sites considerably higher with terrestrial orchids growing along the roadsides.

A few kilometers west of Horsetail Falls, a dirt side-road drops sharply downhill to below a thousand meters, and then back up again to meander southeast adjacent to a river running through the mixed oak-pine forest.

Here several populations of *Epidendrum magnoliae* flourish in the oaks alongside the relatively shallow river at 1064 m.



Fig. 3. Wilma Ferry, Dr. Salvador Conteras B, and son Salvador look at oaks bearing plants of *Epidendrum magnoliae*. Nuevo León, Mexico. Photo: R. J. Ferry. 35mm transparency #080804-19. 08Aug-04.

On a much earlier trip, a color transparency recorded the author's wife and friends looking at them from the road above the steep bank to the river (Figs. 3, 4).

Continuing westward on the Laguna Sanchez highway we dip lower in elevation for a short distance and see plants of *Govenia lilacea* at a mere 859 m. Then, as we



Fig. 4. Site of populations of *Epidendrum magnoliae* in oaks alongside river.
25°17'28.79' N, 100°07'24.19' W. Elevation 1064 m. Nuevo León, Mexico.

drive upward into the *really* hilly country, various orchid species are encountered. Almost immediately we see another *Govenia*; this one is *G. lagenophora* at 1153 m, and there are frequent stops to see others. We see plants of *Malaxis brachystachys* at 1226 m, *Galeoglossum tubulosum* at 1305 m, *Goodyera oblongifolia* and *Sarcoglottis schaffneri* at 1358 m (Fig. 5), *Malaxis brachyrrhynchos* at 1377 m,



Fig. 5. *Sarcoglottis schaffneri*.
25023'14.30" N, 100°14'37.73 W. 1358 m.
Photo: S. Contreras A. 08May-11.

Fig. 6. *Schiedeella* species.
25°22'00.47" N, 100°11'35.9798 W. 1564 m
Photo: S. Contreras A. Hwy. Km 17. 04Jun-10.

Mesadenus polyanthus at 1470 m, a *Schiedeella* species at 1564 m (Fig. 6), and



Fig. 7. *Diuregyne eriophora* .

25°21'34.92" N., 100°22'35.30" W. Elev 2049 m
06Apr-06



Fig. 8. *Malaxis wendtii* .

25°21'34.92" N., 100°22'35.30" W. elev 2049 m.
both photos: S. Contreras A. 27Aug-09

Diuregyne eriophora and *Malaxis wendtii* at 2049 m (Figs. 7 and 8),



Fig. 9. above: *Hexalectris nitida*.

25°29'12.51" N, 100°11'34'40.86" W. 2435 m.
Photo: S. Contreras A. Km 17, L. S. Hwy 30Apr-06



Fig. 10. Right: *Hexalectris revoluta*.

25°29'12.51" N, 100°11'34'40.86" W. 2435 m.
Photo: S. Contreras A. 13May-06.

...and *Hexalectris nitida* and *H. revoluta* at 2435 m (Figs. 9 and 10).

There are many more orchid species, but this gives an idea of some of the terrestrials one encounters during the long spring-summer-fall season as the elevation increases along this road along the crest of the Sierra Madre in Mexico.

At the western edge of the town of Laguna Sanchez we found a plant of *D. cinnabarinus* (Fig. 11) on a hairpin curve with a steep drop (Fig. 12). The plant was past flowering, and its perch was precariously close to a 50 foot drop, but such conditions are common when photographing orchids in the field! This piece has offered only a rough survey about these Mexican relatives of our orchids one encounters along this road and closes with a view from Laguna Sanchez, Nuevo León, looking north toward Saltillo, Coahuila beyond the mountains (Fig. 13).



Fig. 11 *D. cinnabarinus* on cliff at hairpin curve.
Digital DSC_3212 Sat-26Sept-09.
Photo: R. J. Ferry Laguna Sanchez, NL, Méx.



Fig. 12. Hairpin Curve at Laguna Sanchez, Méx.
37° 10' 76.6''W., 28°04'75.8''N Elev. 1896 m.
Image: S Contreras A. via Google Earth.

Fig. 13.
The view
looking toward
Saltillo.
Photo: R. Ferry.



Orchid Tales from the North Woods

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(all figures are by author unless otherwise noted)

It is July 2, 2011 and the Nelson family of NYC - Tom, Jackie and daughters Johanna (age 12) and Christina (age 8) – has recently embarked on a five week cross-country road trip. Today we are headed for the Upper Peninsula town of Grand Marais, Michigan and hope to arrive in time to visit some orchid sites there. The drive northward through Michigan is pleasant, but not particularly scenic until one reaches the mighty Mackinac Bridge, the third longest suspension bridge in the world and the gateway to the Upper Peninsula. The view from the bridge of the majestic Straits of Mackinac never fails to thrill us. Once the bridge is crossed, the flora is distinctly different. Previously unseen species such as *Lilium philadelphicum* (wood lily) start to appear and the boreal forest begins to make its presence known. On the nearby shores of Lake Huron and Drummond Island there are exposed limestone barrens known as alvars – these are also found on the Bruce Peninsula on the opposite side of the lake—as well as some calcareous fens. A lot of native orchid species are found in these areas, as we had discovered in 2010 when Michigan resident Steve Baker showed us around. Regrettably, there was no time to stop today so we forged ahead, as it was already early afternoon.

We turned off the interstate and headed toward Grand Marais via secondary roads. We had now driven far enough to the north that it was spring again and the roadside ditches were ablaze with *Iris versicolor* (blue flag) and wood lilies and the lilacs were still in full bloom in people’s yards. I managed to lose the highway in a small town that we passed through and when the road got narrower and turned to gravel, I realized that I had made a mistake. But the blooms were fantastic! Retracing our route, we hurried northwards, racing against the rapidly advancing sun.

We finally reached Grand Marais and the south shore of Lake Superior by about 5 p.m. and quickly headed over to the nearby Grand Sable Dunes, located in Pictured Rocks National Lakeshore. This would be our third visit to the area and thanks to Steve Baker and his friend Al Menk, we now know where the orchid populations are. Al had contacted me after reading my 2009 article in the *North American Native Orchid Journal* where I recounted the trouble I had experienced trying to locate *Neottia auriculata* (auricled twayblade) in 2008 and offered to show me where the plants grew. Al was unable to make it when we returned in 2010, so his friend Steve Baker kindly guided us around.

The first spot we visited is a mixed evergreen/deciduous forest growing on giant sand dunes just off the shore of Superior and is prime orchid habitat. Steve calls it his favorite orchid site—and it didn’t disappoint us. We found eight spe-

cies: *Platanthera hookeri* (Hooker's orchid) in prime bloom; *Platanthera orbiculata* var. *macrophylla* (Goldie's pad-leaved orchid) and *Spiranthes lacera* var. *lacera* (northern slender ladies'-tresses) just starting to bloom; and *Goodyera oblongifolia* (giant rattlesnake orchid), *Goodyera tessellata* (checkered rattlesnake orchid) (Fig. 1), *Cypripedium arietinum* (ram's-head lady's-slipper), *Cypripedium acaule* (pink lady's-slipper) and *Corallorhiza maculata* var. *maculata* (spotted coralroot) either past-bloom or in bud. The *Platanthera hookeri* colony was amazing; fifty to sixty robust plants were growing in close ranks on a hillside just waiting to be photographed (Fig. 2, Fig. 2b, & 3).



Fig. 1 *Goodyera tessellata*.
(checkered rattlesnake orchid).



Fig. 2b.



Figs. 2 & 2b. *Platanthera hookeri* (Hooker's orchid)

It was now dinner time and everyone was hungry, but I had to check out the *Neottia auriculata* site that Steve had shown us the previous year before calling it a day. A favored habitat of the species is mossy stream banks underneath

alders. This particular site is only accessible from the stream, so I removed my shoes, rolled up my trousers and waded in. (Fig. 4) It took some searching, but I finally managed to locate twelve tiny plants, no more than 4-5 inches tall, growing on a precariously balanced slab of soil that looked like it could wash away at any time. It was thrilling to finally see this rare orchid in bloom after a multi-year search. The mosquitoes were feasting on my exposed arms and legs so I beat a hasty retreat and we headed for the motel and dinner at our favorite local restaurant. I would return in the morning to photograph, when the sun would be shining on the east facing bank where the orchids grow.

On the morning of July 3rd, 2011 the plan was to reach Bemidji, Minnesota (500+ miles away) by evening, so I dragged myself out of bed at 6 a.m. and leaving the girls sleeping, was out on the dunes by 7:00 a.m.—camera at the ready.



Fig. 3. Inflorescence of *Platanthera hookeri*, (Hooker's orchid).



Photo by Johanna Nelson.

Fig. 4. Inspecting plants of *Neottia auriculata*, (by wading, then squatting, in the creek).

It was truly beautiful in the early morning but there was just one problem: the sun had yet to rise over the tall dunes and it was still too dark for good photos. The population of *Platanthera orbiculata* var. *macrophylla* is one of the main attractions at the site, so I set my equipment up in front of one of the best ones and waited for the sun to illuminate the paradisiacal setting. I had seen the species a few weeks earlier near Cortland, New York, but the specimens here were giants compared to those. With two thick, fleshy basal leaves that are easily the size of a man's hand, complimented by a 24 to 30-inch raceme of blossoms, it is a true "trophy orchid." (Fig. 5) As I waited I scouted the area and found about twenty plants growing in an area approxi-

mately the size of a city lot, where the conditions are obviously perfect for them. (Fig. 5, also back cover). The sun peeked over the dunes and beautiful soft light filtered through the trees— perfect! The plants were still about a week away from prime bloom with only a few flowers open on the bottom, but I've learned over the years that the intrepid orchid hunter takes what he gets and doesn't complain.



Fig. 5. *Platanthera orbiculata* var. *macrophylla* (Goldie's pad-leaved orchid) and *Cypripedium arietinum* (ram's-head lady's-slipper) with ripening fruit.

Having only eaten a granola bar so far, I was famished so I returned to town and waited for the restaurant to open. After a huge breakfast of pancakes and eggs, I felt much better. I checked in with the family and then headed over to the *Neottia auriculata* site. Photographing there poses many challenges as a tripod cannot be

placed in the swiftly moving currents of the stream and there is no access from the bank whatsoever, but I had devised a plan and knew just what I had to do. Having already changed into my swimming suit, I emptied the plastic milk crate that we use as a grub box in the car and headed down the trail to the orchid site. I was glad that it was still early as it is a popular tourist area because I didn't want to attract too much attention. I spread my gear out on the stream bank, attached the ring flash to the camera, put a few extension tubes in the pocket of my denim shirt and then—milk crate in hand and camera around my neck—waded over to the site. I had no idea if it would really work, but upon reaching the orchids, I put the milk crate in the stream and sat on it. Amazingly, it settled in amongst the rocks, providing a stable working platform for my photographic purposes. By using the ring flash, I didn't need a tripod and I was able to get the desired photos that I had waited so long for. (Fig.6). I only wish the family had been along to take a photo of me sitting in the stream on a milk crate. Oh well.



Fig. 6. Inflorescence of *Neottia auriculata* (the auricled twayblade)

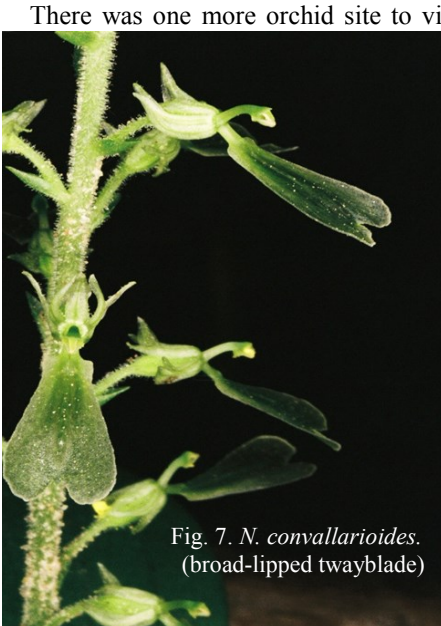


Fig. 7. *N. convallarioides*. (broad-lipped twayblade)

There was one more orchid site to visit in Pictured Rocks National Lakeshore before we headed west. As always happens, I had already spent too much time photographing and we were running late, but the stop was well worth it. In 2010 Steve Baker had shown us a large population of the more common *Neottia convallarioides* (broad-lipped twayblade) growing in a deciduous forest on the dunes (Figs. 7 & 8). As is often the case, I left my very tolerant family waiting with the car while I walked the few hundred yards to the orchid site. It was quite a sight! Hundreds of *N. convallarioides* were in full bloom, along with a few *Coeloglossum viride* var. *virescens* (long-bracted green orchid). I often use a diffusion tent to create ideal photographic conditions, so I busied myself setting it and my camera gear up. After

I had taken about ten images I realized that the ASA setting on the camera was wrong. I travel with two matching Pentax K1000 film cameras and I had managed to break my shutter release cable off in the shutter release of one of them earlier in the day. (Don't ask!) I had switched to the other camera and had forgotten to change the ASA. Now I had to reshoot everything, which of course took even more time.

When I finally returned to the car, I was greeted none too warmly by the Nelson ladies. "Why did you take so long? It's almost 1 p.m. and we have 500 miles to go!" So, dropping all of my camera gear in front of the car where they were standing, I hurriedly went around to the back of the car and changed out of my field clothes. We then got in the car and drove off. Forty miles down the road, we made a stop in Christmas, Michigan at, of course, the Christmas Store.



Fig. 8. *Neottia convallarioides* (broad-lipped twayblade).

The girls had been looking forward to this and they excitedly went inside. I went around to the back of the car to get something and when I opened up the hatch, I realized that my camera bag, diffusion tent and tripods were not in the car! I had left everything back in the parking lot where I had changed. Needless to say, we panicked. It's probably the longest 40 miles I've ever driven. Racing back across the narrow dirt roads of Pictured Rocks at 70-80 mph, I tried not to think of the ramifications of losing all of my camera gear on the third day of a five week trip. Miraculously, when we reached the parking lot, everything was right where I had left it. Some kind person had piled it neatly up against a bench, probably knowing that I'd be back. All of my lenses, video camera, ring flash, tripods, diffusion tent, as well as the hard-earned images from earlier in the day were all safe! It probably helped that I carry everything in an old beat up backpack, not a standard camera bag. We stopped in Grand Marais to get gas and when I told my story to the attendant he was not at all surprised. "Of course it was still there!" he said, "This is the Upper Peninsula! We don't even lock our doors!"

It was now 3 p.m. and we were way behind schedule. Our faith in humanity and the inherent goodness of people reaffirmed and overjoyed to once again be in possession of the camera gear, we started out for Bemidji one more time, finally arriving there totally exhausted, at 12:30 a.m. Central Time.

July 4th, 2011 found us 1,500 miles from home taking a much needed rest day in one of our favorite orchid areas. It was Independence Day and the town was packed. I had managed to reserve one of the last available rooms in the Hampton Inn that is located on the south shore of Lake Bemidji six months earlier and we were comfortably ensconced there for two nights.

On July 6th, 2010 we had visited, along with orchid-friend Eric Lamont and our guide—Minnesota native Robert Freeman—an orchid-rich bog near Lake Itasca State Park, about 25 miles south of Bemidji. I was very excited to return to the site again, but would do it alone this time, as it is one of the buggiest places we have ever visited. The girls were very happy to stay in our luxurious lake-front hotel and swim in the pool, so I excitedly set off for the bog. Technically a raised-bed coniferous forest, the site has been preserved by the state as a study area since the 1930s. We had found the elusive *Hammarbya* (formerly *Malaxis*) *paludosa* (bog adder's-mouth) as well as 14 other species of orchids there in 2010, making it one of the most species-rich locations we have ever visited. As I got out of the car I was immediately surrounded by swarms of very large flies, like something out of a Hitchcock film. These insects, which also inhabit orchid-rich areas in southern Manitoba, don't seem to bite but are very annoying and terrify Johanna and Christina, as a dozen or so always seem to get trapped in the car.



Fig. 9. *Cypripedium reginae* (showy lady's-slipper). the "Queen lady's-slipper".

Jackie and I have noticed a correlation between prime-blooming orchid species and hordes of insects: the more bugs, the better the orchids! Donning rubber boots and the requisite bug hat, I ventured out into the primeval paradise. Like almost all of the North Woods, the bog is second growth forest, which no doubt created great orchid habitat. Isolated and beautiful, I had the place to myself on this day. Large stands of *Cypripedium reginae* (showy lady's-slipper) were in prime bloom, unlike 2010, an early season when they were mostly past. The regal "Queen lady's-slipper" is near the top of my list of favorite native orchid species and always requires a lot of camera time. (Figs. 9 & 10) Nine other orchid species were present on this day: *Malaxis unifolia* (green adder's-mouth orchid) (Fig. 11); *Neottia cordata* var. *cordata* (heart-leaved twayblade); *Corallorhiza trifida* (early coralroot); *Cypripedium parviflorum* var. *pubescens* (large yellow lady's-slipper); *Cypripedium acaule* (pink lady's-slipper); *Amerorchis rotundifolia* (small round-leaf orchid) *Platanthera aquilonis* (northern green bog orchid); *Coeloglossum viride* var. *viridescens* (long-bracted green orchid); and *Platanthera obtusata* (blunt-leaved rein



Fig. 10. Close-in: The “Queen lady’s-slipper”.

orchid). I had expected more species to be in bloom in the bog. The showies and bog orchids were in good shape but the earlier bloomers seemed to have been affected by the 90+ degree temperatures that were currently gripping the region and had gone past. But it really didn't matter; the birds were singing, the sun was shining and I happily spent the next few hours exploring what I consider to be one of the top five orchid

sites that I have visited thus far.

As I walked through the mossy woods I was amazed at the sheer numbers of individuals of the different species present; truly an orchid mega flora. We've seen areas in Newfoundland and Manitoba that have species density comparable to this, but in most other areas the populations are

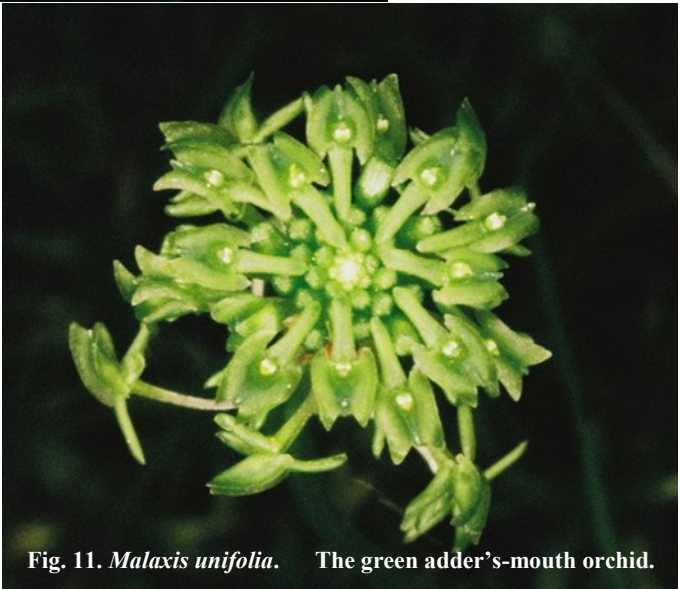


Fig. 11. *Malaxis unifolia*. The green adder's-mouth orchid.

more scattered out. Fighting through the brush and muck, one will suddenly enter an opening chock-full of huge pink lady's-slippers; other clearings harbor hundreds of showies in regal formation; another area has a colony of giant-sized *Cypripedium parviflorum* var. *pubescens* (large yellow lady's-slipper) —perhaps the largest-flowered individuals that I have ever seen, with goose-egg sized blossoms (Fig. 12); in a far corner the ground is swarming with *Amerorchis rotundifolia* (small round-leaf orchid) and growing everywhere are the other orchid genera pre-

sent: *Neottia*, *Platanthera*, *Malaxis* and *Corallorhiza*. And to top it all off, later in the season there's always a good chance that the keen-eyed orchid enthusiast will discover the ever-elusive *Hammarbya paludosa* (bog adder's-mouth) one of the rarest orchids in North America, secreted away in its boreal redoubt (Fig. 13). The large yellow lady's-slipper and bog adder's-mouth images were taken on our 2010 visit when these two species were in prime-bloom.



Fig. 12. *Cypripedium parviflorum* var. *pubescens*.
(large yellow lady's-slipper)



Fig. 13. *Hammarbya paludosa*.
The bog adder's-mouth orchid.

I spent a considerable amount of time trying to get a decent close-up ring-flash shot of *Platanthera aquilonis* (northern green bog orchid). This required lying down in the bog and consorting with the myriad mosquitoes— all the while with my left ear in the muck. The flowers were positioned at a tricky angle, making for very difficult photography, but I managed to get a few good images (Fig. 14). There was no sign of *Hammarbya paludosa* this year. In 2010 an entirely different group of orchids had been in bloom on almost the same date. This was further evidence of how mixed-up the blooming seasons and weather in general have become in the last few years, a point that would be reinforced throughout our trip. I had been excited to check out some orchid sites in



Fig. 14. *Platanthera aquilonis*.
The northern green bog orchid.

nearby Lake Itasca State Park, but my efforts were thwarted by budget wrangling between the Minnesota Governor and State Legislature. All state parks were closed due to the impasse.

I was disappointed but not defeated! I then returned to the hotel and joined the ladies for a late lunch, after which we headed out to the nearby Lady Slipper Scenic Byway, a place we had not had time to visit in 2010. The



Fig. 15. The Nelson family at Lady Slipper Park at Williams, Minnesota.. Left to right: Johanna, Tom, Christina, and Jackie. Photo: Eric Lamont, 2010.

showy lady's-slipper is Minnesota's state flower and a big deal is made out of that fact, which is really great. "Orchid Festivals" are held in the towns of Williams and Blackduck around blooming time; both these areas have abundant roadside showies and yellow



Fig. 16. *Cyp. reginae* (showy lady slipper). The Minnesota State Flower.

“corrals” planted in rows like corn for the duration of the construction. This sort of planting is rather disquieting, but I guess it's better than mowing them down. We visited a yet-to-be-disturbed area and were treated to a roadside display like few we've seen: hundreds of prime-bloom orchids filling the roadside ditches. (Fig. 16) We then headed back to the hotel for the Fourth of July festivities. Johanna and Christina are always disappointed when we are in Canada on the holiday and miss the fireworks, but today they were very lucky; the fireworks were set off on the beach in front of our hotel and we had a front row seat for what proved to be an excellent show. A fitting end to a great day!

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