The Trillium

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North American Rock Garden Society

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A Brief Overview . . .

Cloud Forests

by Ted Kipping

Cloud forests are complex montane communities visibly dominated by woody species, which capture and precipitate surprising amounts of moisture that condenses out of rising moist air masses, cooling and condensing into dense fogs.

Tropical and subtropical montane areas experience warm days and cool nights and, where still forested, regular drenching by fog. A rain gauge placed beneath a tanbark oak (*Lithocarpus densiflorus*) in the Santa Cruz mountains just south of San Francisco one foggy summer yielded over 60 inches accumulated "precipitation"—nearly equaling winter and spring rainfall. Another rain gauge beneath a redwood tree in Marin County, California, just north of San Francisco, attained over 40 inches. These coastal fogs support some of the largest trees on earth.

See Kipping. Continued on page 2.

Some have ornamental value . . .

Smilax—The Greenbriers

by Robert McCartney

The name *smilax* (an ancient Greek plant name) means different things to different people. To the florist it means a species of asparagus (*A. asparagoides*), native to South Africa and grown form decoration and floral arrangements. True smilax, also in the diverse lily family (Liliaceae), is a large genus of plants native to many tropical and temperate regions. A tropical species which grows in Jamaica is the source of the tonic sarsaparilla and root beer. About a dozen species are native to the Carolinas. These range from seldom-notices rather unobtrusive woodland shrublets such as *Smilax echirrata*, to high climbing evergreen vises such as *S. laurifolia* of our Coastal Plain acid swamps and bogs. Most species are thorny, some exceedingly so,

See McCartney. Continued on page 2.

Our October meeting of NARGS
Saturday, October 16, 1999
10:00 a.m., Totten Center
N.C. Botanical Garden, Chapel Hill, N.C.
"Cloud Forests of Oaxaca and Chiapas, Mexico"
Ted Kipping
San Francisco, Calif.

Plant sales auctioneer will be Norman Beal.

Members "I" through "O" bring goodies.

Our November meeting of NARGS
Saturday, November 20, 1999
10:00 a.m., Totten Center
N.C. Botanical Garden, Chapel Hill, N.C.
"Unknown Southern Natives for the Rock Garden"
Robert McCartney
Aiken, South Carolina

Plant sales auctioneer will be Todd Lasseigne.

Members "P" through "Z" bring goodies.

Kipping. Continued from page 1.

The mountains of southernmost Mexico divide into two generalized chains—the Cordillera Orientale and Occidentale ("east" and "west" in Spanish). They run north to south. Just as the Appalachian mountain tops have served as a north-south corridor for biota and an east-west barrier to other biota, so, too, do the Mexican mountains. Some of the mountainous areas are "islands" or refuges whose species occur nowhere else. Although these have been successful occupants for perhaps millions of years on their solitary mountain tops, they are highly vulnerable to extinction through population induced deforestation.

The diversity is incredible; the state of Chiapis, for example, at roughly 100 x 100 miles has over 8,800 taxa of plants; one square mile of mountain top cloud forest might harbor 1,700 species (more than all of France!). Regrettably one-fourth are threatened.

[*Ted Kipping lives in San Francisco, Calif. He is a member of of the Board of Directors of NARGS, and operates a tree shaping and pruning service.*]

McCartney. Continued from page 1.

and several including *S. laurifolia, S. rotundifolia,* and *S. bona-nox* and *S. glauca* are the well known catbriers, despised by outdoorsmen who often find their clothes and flesh torn by them.

All smilax are dioecious. The female plant bears berries that are usually black or blue, but red in a few species. Most are true vines, climbing by tendrils. The majority are woody vines but a few species are herbaceous and die to the ground each winter.

The long flexible stems of smilax are reportedly used for basket weaving on some islands in the Carribean. Possibly some of our southern species have been similarly utilized. Our native greenbriers are of limited economic importance but *Smilax smallii* (also known as *S. lanceolata*) had been commercially exploited. The great southern botanist Roland Harper wrote in 1928 about the town of Evergreen, Alabama:

"This might be called the vine that made Evergreen famous. It was first shipped from there to northern markets by G. W. Caldwell in about 1888, and large quantities have been shipped from there to other places in southern Alabama since [then], so that the natural supply must be considerably depleted by this time. But as it grow readily on various trees that spring up in fence corners, it is not likely to be exterminated very soon. In addition to its decorative value, it might be useful in a small way for stock feed, for Mr. Caldwell found that cows were very fond of the scraps left over when the vines were prepared for shipment."

Perhaps the cows knew what they were doing for in the Low Country of South Carolina and possibly elsewhere, tender young shoots of this and perhaps other "chainey-briers" are gathered and cooked like asparagus. *Smilax smallii* grows from large potato-like tubers and produces beautiful sprays of glossy foliage on high-climbing, almost thornless stems. It is a favorite vine for porches, arbors, etc., and as mentioned above, a favorite cut "greens" for decorating. Curiously, the foliage on young plants is quite different and not so attractive.

Other species of ornamental value might include *Smilax laurifolia, S. erhirrata, S. walteri, S. pumila,* and *S. auriculata.* The latter species forms dense, tangled mounds on our coastal sands in full sun. It has evergreen, arrowhead-shaped leaves and very fragrant flowers. This in contrast to some species such as *S. herbacea* which have file-smelling flowers and are known as carrion flowers.

Smilax walteri and *S. pumila* have red berries. These are especially attractive in deciduous *S. walteri* which is usually seen overhanging dark swamp waters in the coastal plain. *S. pumila* is a very attractive foliage of a soft green somewhat mottled character. It has red football-shaped fruits but these are usually somewhat hidden by the foliage.

Smilax can make an attractive garden plant it care is taken to select the right species for the site and for the desired effect. Remember that some may be stoloniferous and therefore invasive and that those grown for their berries need both sexes. The more desirable species are available as nursery-grown plants from a very few nurseries specializing in native plants.

[*Robert B. McCartney is co-owner of Woolanders, Inc., in Aiken, S.C. This article originally appeared in the newsletter of the North Carolina Wild Flower Preservation Society in Spring, 1981. Reprinted by permission of Robert McCartney.*]

"A profusion of colorful flowers . . ."

A Biological Tour of South Africa

by Jim Shields

We flew from London's Heathrow on British Airways to Johannesburg, an overnight flight on which it pays to get some sleep. The plane took off in the evening on August 1, 1999, and we arrived in Johannesburg the next morning.

From a distance, Johannesburg looks like any other large city with tall buildings at its center. There is a perpetual haze, especially in winter, from veldt fires and from cooking fires in the surrounding settlements ofpeople from the countryside and from outside South Africa who have come to Johannesburg looking for work. The unemployment rate in South Africa is about 40%. The greater metropolitan area around and includingJohannesburg has a population of at least 7 million now, perhaps more, since no one has an accurate idea of how many immigrants, both legal as well as illegal, actually live in this area. The original landscape around Johannesburg was high veldt, open grasslands with a scattering of small acacia scrub.

This is winter in Johannesburg and in most of South Africa. There, winter is the dry season over most of the country. Fortunately, the afternoons were much cooler than in summer. The disadvantage is that there are very few flowers blooming now. It was not the best of all times to visit a botanic garden, but it turned out to be a good time to visit Dr. Robert Archer and the National Botanic Institute in Pretoria. We were treated to a personal viewing of a volume of Redoute' original watercolors of many flowers, dating from the mid-18th century. More pertinent, we saw an original edition of W.E. Herbert's book *Amaryllidaceae*.

Herbarium Stop at Pretoria

The herbarium at Pretoria contains over 100,000 specimens of 24,000 species. The live plants themselves were no less interesting. This is dead of winter here, and most bulbous plants are invisible below ground. Colorful exceptions, not bulbs of course, were some large aloes. Several plants of *Aloe marlloti* (sp?) were in bloom, although past prime. Just at peak however was an equally large hybrid aloe, over 6 feet tall, of uncertain parentage.

One large greenhouse was half filled with trays of Lithops and related "rock plants" growing in their original soil with the original pebbles lying with them on the surface, the donation of one man who was a passionate collector of plants. In fact, the greenhouses in the private research section of the gardens specialize mainly in succulents.

The plants of most interest to me were some unusual looking clivia specimens. The plants in one group were extraordinarily robust, and we at first mistook them for shade-loving crinums. While their precise identity still eludes the botanists studying them, they appear to be a very robust form of *Clivia nobilis*. This is especially interesting since *C. nobilis* is a notoriously slow growing plant from seed. Another small clivia in bloom with tubular flowers of a pale yellow tinted with pink seems to be related to *C. nobilis* and *C. gardenii*. These are all fascinating plants.

We were treated to the sight of a living welwitschia plant in the last greenhouse. It is known to be at least 50 years old, with its two lonely leaves stretched out across the soil surface, their ends trailing off dry, gray, and tattered.

A visit to the Hadeco Pty. Ltd. bulb production facility at Mariasburg, outside Pretoria, followed on Tuesday morning. Stuart Barnhoorn, production manager and son of owner Floris Barnhoorn, showed us through their production facilities there. They have been developing their own hybrid lines of hippeastrum, and have a tissue culture facility with a sterile area and laminar flow hoods. They are using embryo rescue to work with crosses between the traditional "Dutch" hybrids, tetraploids, and the wild species, mainly diploids. Hadeco sells in North America only through distributors like Van Bourgondien, but under their own name in southern Africa and in Japan. They produce large numbers of cut flowers, which are sold locally through an auction system like the one used for this in the Netherlands. They were shipping tulips in bud and some attractive double narcissus in full bloom when we visited. The tulip bulbs are discarded when the cut flowers are harvested, since they cut the entire stem with all the leaves to give the cut tulip good height.

We visited one of their farms near Margaliesburg, where they have large numbers of *Ornithogalum trifolium* (?) growing under shade cloth. They grow most of their cut flowers under shade cloth to get longer stems. The South African sunlight is otherwise quite intense, and causes the plants to grow

and flower with shorter stems than one sees on the same varieties growing in, for instance, England. For cut flowers, the longer stems are more desirable.

We noticed very few wild flowers blooming, but in the Margaliesburg area, two species of aloe were in bloom, one with many seed pods already starting to ripen, but another with a full spike of flowers and buds. These seem to be late winter bloomers. The commoner of these aloes, going to seed, was probably *Aloe transvaalensis*. As a sign of spring about to arrive, peach trees in the orchards were showing lots of color in their buds.

The scrub in this area is a type of native protea with an insignificant flower. We also noticed Australian black acacia blooming, with bright yellow panicles at the ends of their branches. This tree, sometimes referred to locally as a "wattle," and was originally brought to South Africa to provide a source of tannic acid for tanning leather.

The eucalyptus trees and the wattle trees are both alien species from Australia which have increased beyond reason. Efforts have begun to eradicate the black acacia, but eucalyptus is still planted and cultivated for timber.

We visited a small country hotel, the Valley Lodge, for lunch. It is located outside Margaliesburg, inside a fenced compound behind large gates. The hotel had cottages with thatched roofs as guest rooms, some on the bank of a river.

The federal government seat in Pretoria is called the Union Building. There is a large park leading up to the hilltop government building from Church Street. This provides a magnificent view of the building from Church Street. The park grounds in front of the parliament building were beautifully manicured, with beds of native South African bedding plants, including Osteospermum, Gazania, and Felicia.

We left Sandton and the Garden Court Holiday Inn on Wednesday morning and drove straight through to Pilgrims Rest and the Mount Sheba Country Lodge. In getting there, we drove over the Drakensberg, where the highway reached an altitude of 2150 m, about 7,000 ft above sea level at Longtom Pass. The hotel itself was at the end of a bumpy 6 km dirt road. Once there, we had only the finest of service.

Crossing the Drakensberg

The Drakensberg in Mpumalanga Province was mostly grassland on the west side of the crest, with farming dominating the area. From the Highveld, where corn and beef are raised everywhere, to the tops of the ridges where terraced fields are used to grow virus-free seed potatoes, the land is completely fenced and farmed. Huge grain elevators with many silos dominate many a view of the Highveld between Pretoria and Belfast. The only wild game seen were being raised as stock on farms in the foothills above Dullstroom - impala, hartebeest, and ostrich, and even this was very rare.

On the east side of the backbone of the Drakensberg mountains, which face the Indian Ocean and get summer rainfall in relative plenty, the government timber company tree operates farms over almost the complete eastern slope. The main crops are eucalyptus, which takes 17 years to mature, and pine, which needs 35 years. There was very little native forest in South Africa when Europeans first settled here. It is still an economic necessity to grow these introduced trees to supply lumber to the whole country.

As we neared Pilgrims Rest, we saw a few instances of native forest stands in the ravines. It looked as if the principal large tree was a ficus. There were numerous trees of the cabbage palm, looking at first glance like a schefflera, and an occasional Podocarpus was noted. The most striking were the leafless coral trees starting to bloom; the one we saw was probably *Erythrina lysistemon*, the common coral.

We left the Mount Sheba Country Lodge in the early morning fog and retraced our steps back toward Pilgrims Rest. We noted the presence of some wild baboons in the tree farms of the eastern slope. These and an occasional bird were the only wild life in evidence. We drove to the Kruger Gate entrance to Kruger National Park and drove north to our lodge in the Letaba camp.

Kruger and Hluhluwe Game Parks

Kruger was very active with game on this day, August 5, 1999. We saw impala right near the entrance; our guide suggested that impala were so abundant in Kruger that it should be called "Impala National Park" instead of "Kruger." We rather quickly became very blasé about sighting impala, since they were often congregated in small mobs right beside the highway. The next species we saw was steenbok and then a large female kudu and her two nearly-grown daughters.

Once we reached the Sabie River, we started

sighting giraffes as well as the usual impalas. Just before we stopped for lunch at Tshokwane, we saw a pair of klipspringers on a rocky hill.

After lunch, as we proceeded toward Satara, we saw many more giraffes, zebras, a small family of elephants, wildebeest, and a waterbuck at various places along the way. The family of elephants was crossing the road ahead of us. This stopped traffic, of course, and caused a traffic jam. There were enough cars and buses in the way that we saw very little of the actual elephants themselves. By the time we had reached Letaba, we had seen a crocodile, a saddle-bill stork, a marabou stork, lilac-breasted rollers (a brightly colored bird), a ringed plover mother and two chicks, black backed jackals, distant lions in two different spots, and finally our coach and trailer were mock-charged by a large lone bull elephant. A most suitable end to a very exciting day!

The next day we saw hippos, crocodiles, more distant elephants (the best kind!), waterbucks, saddle-billed storks, marabou storks, a hyena, occasional jackals, a few more kudus, and finally, a large herd of buffalo. The prime sighting of the whole visit to Kruger was in the twilight just before sunrise, seeing a small gray African wild cat at the edge of the brush not far from the roadside. This may have been the original wild species tamed by the ancient Egyptians and domesticated into our modern house cat. This species is one of the rarest animals in Kruger Park.

Later that day we saw numerous Tsessebe antelope, near the southernmost occurrence in the wild of the reknown baobab trees, *Adansonia digitalis*. All through Kruger, we often saw zebra, which in this area are Burchell's zebra. It was not unusual to see a few wildebeest hanging around near herds of zebra. There seems to be some sort of mutual compatibility between the two species.

On August 7th, we saw a herd of buffalo crossing the road, and got a great view as they crossed not far ahead of us and back behind our minibus. At a large waterhole, we saw waterbuck, impalas, herons, storks, and a crocodile resting on a small island.

We drove to a high hilltop lookout, Nkumbe. Besides having two unique and endemic euphrobia tree species, Nkumbe offers a view of miles and miles of savannah in Kruger Park as far as the eye can see in every direction.

Coming back down to the lowlands, we stopped beside a stream to watch a pair of the very colorful Saddlebill Storks hunting food and preening. It was very unusual to see the pair together. These beautiful large birds have bodies of bold black and white. Their bills are vivid red with back and bright yellow bands.

Farther along this road, a family of warthogs hunted food in the rough grass and low scrub. Along water courses, the striking Fever Trees could be seen. These large trees, completely leafless now in winter, have yellow bark on trunks and larger limbs while the smaller limbs and branches have a silvery sheen. The early Dutch settlers camped beneath these large trees, and blamed them for the malaria they often contracted here.

We headed south on our way out of Kruger on the morning of our fourth day there. Giraffe seemed very plentiful at times, too. Being back in the southern part of Kruger, we again saw numerous impala. We left Kruger National Park itself the afternoon of Saturday, August 8th, and stopped overnight at the Moevenpick Lodge just outside Kruger Gate.

Crossing Swaziland

On Sunday we drove across Swaziland to get from Kruger to KwaZulu/Natal. Swaziland is largely agricultural, but with some mining too. A major crop is sugar cane, and we saw a few fields of pineapple, more timber plantations, avocado orchards, and macadamia nut orchards. Papaya appears to be a cottage garden crop, as are bananas. There are also very large commercial banana plantations here.

The land is poor and mountainous; the Swazis came here in the 18th century to get away from the warlike Zulu in Natal. The Zulu are still proud of their warrior traditions, and the Swazis are still a peaceful and friendly people. We took the only paved highway that runs between cities. In contrast, on this Sunday morning, everyone we saw walking along the roadsides was neat, clean, and nicely dressed. They are poor, but they are not in abject poverty, and they have their pride intact. Small kids by the roadsides loved to wave to strangers as we drove past. In the cities, the main streets were all paved.

We had a late breakfast at the Pigg's Peak Hotel and Casino. This was luxuriant in comparison to everything else we saw in Swaziland. The original Mr. Pigg was an Englishman who came out to Swaziland and found gold on what came to be known as Pigg's Peak.

Our base for the next two nights was the

Bushlands Game Lodge, about 10 miles from Hluhluwe National Park (pronounced more or less as "shloo SHLOO wee"). Bushlands is a small private game reserve, with mainly zebra and nyala, as well as a giraffe or two, a warthog, common duiker, and perhaps a couple more species in small numbers. The zebra and the warthog are so tame that they graze on the lawn in front of the cottages and let humans approach to within a dozen or so feet of them.

Our visit to Hluhluwe National Park was very successful: we saw two groups of white rhino. The first was a family group of four, with a huge bull, a half-grown calf, and two females. These were well within telephoto distance. The second sighting was of two rhinos grazing together on the far side of a valley. We also saw wild nyala, as well as the nearly ubiquitous impala and a couple of giraffes.

Hluhluwe National Park is in Kwazulu-Natal Province. It is mountainous and comprised of 96,000 hectares, about 240,000 acres. It has about 1400 white rhinos, 400 black rhinos, 300 elephants, many impala and nyala, and 25 wild dogs. There are lions, but there are relatively more leopards in this park. Unlike Kruger, none of the roads in Hluhluwe are paved inside the park.

Durban Botanic Garden

On leaving Hluhluwe, we drove to Durban and flew that evening to Port Elizabeth. Before leaving Durban, we visited the Durban Botanic Garden and Mitchell Park, both with extensive plantings of indigenous and exotic flowers and landscape plants. There were several mass plantings of bromeliads, most past bloom or not yet blooming. The botanic garden has two recently planted beds of Hemerocallis hybrids, which they purchase from a nursery near Pietermarietzburg. They get no frost, but even so some of the daylilies do go dormant in winter. The assistant curator was not certain whether any of the daylilies had bloomed yet. There is a nice house for display of blooming orchids, and some fine specimen trees of both native and introduced types. Pa≤ticularly welcome was a close look at a Bauhinia tree in full bloom. At Durban Airport we caught a South African Airlines jet to Port Elizabeth, on the south coast.

On August 11, 1999, we drove westward from Port Elizabeth along the southern coastline. This is the Garden Route, from Port Elizabeth to Cape Town. The area between the shore and the first range of mountains, a few miles inland, is part of the Cape Floral Province. There are about 8000 species of plants in the Cape Floral Province, including over 400 Proteaceae, and about 400 Ericaceae. The only native forests in South Africa occurred in the Cape Floral Province. They were composed of podocarpus and other indigenous trees, and grew here along what they now call the Garden Route, thanks to the maritime climate and the rainfall.

We visited the Van Stadens Nature Reserve, on the Cape south coast, west of Port Elizabeth. This area of 700 hectares has been cleared of most exotic and introduced vegetation. There, they propagate native flowering plants from seed and replant them. Their surplus plants are sold to the public. Our personal guide through the reserve was Andre', a self-educated African who has worked there as a gardener for 36 years. Andre' is quite familiar with the botanical names of almost all the plants in the reserve.

They have extensive areas of watsonia plants of uncertain species, probably hybrids. There was a large area planted with king protea, *Protea cynirioides*, which is the largest-flowered protea in South Africa. Other proteas we saw included Protea neglecta and *Protea scolymocephala*, the smallest-flowered protea. There were also *Leucospermum* sp. and *Leucadendron* sp. in bloom. There was *Strelitzia reginae*, as well as its big brother, *Strelitzia nicholai*, which has a white flower enclosed in blue-black beak-like bracts and is arborescent in form. The reserve is full of ericaceous species, several of which were starting to bloom. We saw *Erica polyantha* and *Erica versicolor*. We even spotted a tiny blue-flowered irid, which turned out to be *Aristea pusilla*.

In the area around Storms River and the Tsitsikama National Park, we saw *Wakendorfia* sp. starting to bloom, *Anapalina* sp. [which may go by a different genus name now, probably Tritoniopsis] blooming, and a few *Dierama* sp. in bloom at one point. The film in this area did not wind properly and the pictures were lost.

The Little Karoo

On August 12, we drove inland from the coast through the first mountain range here, into a high plateau area called the Little Karoo. "Karoo" is a desert and the Little Karoo receives only about 8 inches of rain per year. Visually, it reminds me strongly of the Great Basin between the Colorado Rockies and the Sierra Nevada in California. The

Little Karoo has some plants which will grow nowhere else, including an interesting large shrub or small tree call the Chinese lantern bush, *Nymania capensis*. This plant has small rose pink flowers, but the ornamental value comes from the unripe fruit, which is enclosed in a bright pink papery "lantern."

Beyond the next mountain range, the Swartberg, or "Black Mountains," lies the Big Karoo, even drier than the Little Karoo. Winter nighttime temperatures in the Little Karoo can drop to near freezing, while in the summer, afternoon temperatures can reach 115 F (46 C) or higher. This is an extreme environment, and the Big Karoo is even more extreme.

We spent the nights of August 11 and 12 at the Lake Pleasant Hotel, Sedgefield, which is outside of Knysna. On the 13th, we stopped in the morning at Mossel Bay for a brief look around and then had lunch at the Zanddrift Restaurant, in Swellendam. The day really felt like a spring day, for the first time on this trip. We found another tiny blue-flowered irid blooming in the short grass at the Zanddrift.

Cape Town

We arrived in Cape Town at the Mount Nelson Hotel at about 6:00 PM on August 13th. The morning of August 14th we drove around Signal Hill and downtown Cape Town. There was low fog, obscuring the mountains and just above the top of Signal Hill. No pictures were taken except for one chasmanthe. During the early afternoon we were at the Victoria and Alfred Waterfront mall, shopping.

At dinner that evening, Rachel and Rod Saunders told stories about collecting seeds all over southern Africa. Rachel lamented that bureaucrats seem to prefer making trouble to saving plants in the way of developers. It is even getting harder every year for them to get seed-collecting permits.

August 15th was spent making a tour round the cape peninsula. We drove south from the Mount Nelson Hotel along Table Bay. At Chapman's Peak we stopped and photographed white calla lilies (*Zantedeschia aethiopica*) in the wild, a yellow *Oxalis* species, and *Homeria collina* blooming along the roadside. We photographed the scenery too, along Chapman's Peak Drive. At the Cape, we drove up to Cape Point and took the funicular to the top, photographing the actual Cape of Good Hope rocks below us and slightly to the south and west. We also photographed *Homeria* sp., *Osteospermum* sp., a true geranium with tiny (ca. 3/8") lavender pink flowers; a small pink-flowered Mesembryanthemaceae; an Erica; and a small shrub with pink legume-like flowers. Finally we drove up the coast of False Bay to Simon's Town and took pictures of the African ("jackass") penguins which nest on the shore there. Their nesting place is under the National Parks Board, and started only in the early or mid-1980s when the first lone pair of these penguins came ashore and made their nest. Finally, after an excellent seafood lunch at a slightly shabby little restaurant in the town of Kalk Bay, on the shore just below St. James, we drove to Kirstenbosch Botanic Garden to end the afternoon. The sun was nearly setting behind Table Mountain when we arrived. No pictures were taken at the botanic garden that afternoon. However, in the new glass Conservatory, we did see some very impressive *Scadoxus puniceus* in bloom, some huge-leafed *Haemanthus* sp. which were not in flower, very large specimens of *Scadoxus multiflorus katherinae* which were in seed, and a very interesting hybrid clivia which had bright red berries, much more colorful than the usual dull purple-green berries on most clivias. I saw *Clivia nobilis* in bloom, and they were relatively small plants overall, in keeping with the small stature and very slow growth rate of the *Clivia nobilis* seedlings I am growing at home. The new species of clivia at N.B.I. Pretoria is probably *C. nobilis* with the red and green pigments in the flowers suppressed.

August 16th we drove out into the Cape flatlands to the area of Stellenbosch, in wine country. The first stop was morning tea and a garden tour at the home of Una van der Spuy (pronounced "spay"), a vigorous lady in her eighties. She married a South African major general who had started the South African Air Corps in World War I. The general died some years ago at age 99. Una married the general 50 years ago, and found herself faced with creating a garden from scratch for the nearly 200-year old house they had bought. She is a completely self-taught gardener who has written many books on gardening in South Africa over the years.

The estate, called "Old Nectar," is on the lower slopes of a mountain, and has a magnificent view across the valley to another mountain. The grounds have been terraced, creating a series of level areas on which Una has created a series of gardens. The most famous of these is her rose garden, where each section is planted with a single variety of rose. Three of the varieties are still the original roses planted over 50 years ago.

Most of the plants in the "Old Nectar" gardens are traditional garden plants of England, Europe, and California, such as seven large *Magnolia soulangiana* trees, many low azaleas, and camellias the size of trees. Although this visit was still in mid-August, winter, these were all blooming. Indeed, the camellia blossoms mostly looked to a bit past their prime.

There is a special little area dedicated to the general, and called "The general's garden." Under a huge Norfolk Island Pine, there is a low wall with stone bench. Even in winter, with very few flowers in bloom, in this area Una had shrubs and evergreens with contrasting foliage, which provided a fascinating study in gardening with greens.

Among the shrubs and perennials, there were blooms of hellebores, impatiens, and even two clumps of daffodils that have survived the local "gophers" for 50 years thanks to being planted amidst plentiful shards of broken glass.

Across the lower end of the garden, there is a wide walkway marked with pairs of pillars and a simple timber trellis spanning over the walk. She has vines, some of them 50 years old, planted at each column. At one column for instance, there was a Carolina jasmine vine with large yellow flowers. At another, there was a large old vine of *Pyrostegia*, called "Golden Shower."

From "Old Nectar" we went to the Boschendal farm and winery for lunch. The winery, like the town of Stellenbosch, has old Dutch colonial buildings, the "Cape Dutch" style. These buildings are nearly 200 years old, the manor house having been built in 1812. Low growing oxalis, *Oxalis purpurea*, with lovely pink or rose flowers were blooming in the lawn, at least in those areas where the grounds crews had not yet mowed.

Boschendal is part of the old Rhodes Fruit Company, and there are orange orchards in the immediate area around the buildings. The restaurant is in an old building that was originally a stable or stall for farm animals. Lunch is a huge buffet, starting with soup and pate' and going through cold meats to hot dishes and ending with desserts. The dessert that simply must be tried is the Malva pudding.

We finally had a day that was clear enough for a visit to the top of Table Mountain. We took the modern new aerial cable car to the top. The plants atop Table Mountain are all small and low-growing. The winds there can be very strong, and it is easy to see why all the native plants there are of small stature. On top, they are working hard to preserve the indigenous vegetation. They have built paved walks, and some of the areas have been fenced off to protect them.

August 17, 1999 was our free day. I went to back to Kirstenbosch Botanic Garden to take slides of the flowers, and then after lunch to meet Dr. Dee Snijma. One sees that Spring is approaching, as more flowers were in bloom this time than were on our first, brief visit to the garden. Kirstenbosch is devoted exclusively to indigenous South African plants, and there are a profusion of colorful flowers here in the daisy family (Asteraceae) which are all coming rapidly into bloom. In the brand new conservatory, or glasshouse, there are specific areas of the beds devoted to similar types of plants, for instance there is a fern room, a small cycad garden, a room for alpines, one for rock plants (*Lithops*), and one for bulbs. In the main room, the plants are arranged geographically north to south, rather than by family. There was still not much in bloom in the conservatory, but in the bulb room, *Clivia nobilis* was blooming, and *Scadoxus puniceus*, the paint brush, was just coming into bloom. The bulbs and the flowers of the scadoxus were huge! One thing Dee Snijman pointed out was that haemanthus bulbs need to grow to very large size in order to bloom, and that it can take 8 or 9 years for them to do this. This seriously affects their commercial potential, reducing it to almost zero. Dee was already familiar with the failure of Hadeco's efforts to develop cyrtanthus for commercial use as potted bulbs and as cut flowers. The problem was that the bulbs bloom according to their internal calendars, regardless of the treatments given them by the growers. As a result, they all bloom at once, so there cannot be a succession of blooms to produce a continuous source of cut flowers for the markets.

We left Cape Town in the evening on August 18 via London and on to Chicago. We arrived at our own front door at 6:00 p.m. on August 19th. Home again at last!

[Jim Shields lives in Westfield, Indiana, and gardens in USDA Zone 5. He is vice president of the International Bulb Society. Parts of this article were originally published on the International Bulb Society's internet discussion group. Used by permission of the author.]

Members Gardens and Nurseries Weekend Open Days–Fall 1999

Architectual Trees

Every weekend during the fall.
Fridays noon till 6:00 p.m.; Saturdays 10:00 a.m. till 6:00 p.m.; Sundays 10:00 a.m. till 5:00 p.m.
For information, call **John Monroe** at 919-620-0779 for directions.
6404 Amed Rd., Bahama, N.C.

Camellia Forest Nursery

October 9-10, and 16-17
Saturdays 9:00 a.m. till 5:00 p.m.; Sundays 1:00 p.m. till 5:00 p.m.
For information, call **Kai Mei Parks** or **David Parks** at 919-968-0504, or 919-960-7690; or email camforest@aol.com, or http://camforest.com
9701 Carrie Road, Chapel Hill, N.C.

Chatham Growers Association

October 16, 9:00 a.m. till 1:00 p.m.
For information, call **Roger Boyles** at 919-967-9515
Plants will be sold in the North Carolina Botanical Garden staff parking lot, Chapel Hill, N.C.

Gethsemane Gardens and Nursery

Each weekend in October
Fridays and Saturdays 9:00 a.m. till 5:00 p.m.
Sundays 1:00 p.m. till 5:00 p.m.
For information contact **Janice Nicholson** at 1-800-599-2833.
3707 N.C. Hwy. 150 East, Greensboro, N.C.

Montrose Gardens

October 9
10:00 a.m till 4:00 p.m.
No admission charge; park next door at Cameron Park School,
For information, call **Nancy Goodwin** at 919-732-7787
320 St. Marys Road, Hillsborough, N.C.

Niche Gardens

Open weekends now through October 31
Saturdays 9:00 a.m. till 5:00 p.m.; Sundays noon till 5:00 p.m.
For information, call **Kim Hawks** at 919-967-0078 or www.nichegdn.com
1111 Dawson Road, Chapel Hill, N.C.

Singing Springs Nursery

October 10
Sundays 1:00 p.m. till 5:00 p.m.
For information call **Pam Baggett** at 919-732-6336; or email nightair@mindspring.com
8802 Wilkerson Road, Cedar Grove, N.C.

Friends of the JC Raulston Arboretum Fall Lectures

Call 919-515-3132 for information. NCSU, Raleigh, N.C., Room 159 Kilgore Hall, 7:30 p.m.
Fee for non-members

October 21, 1999: **Dick Bell** on "Urban Projects in the Landscape"

November 6, 1999: **Brent Heath** on "Scenes of South Africa"

November 11, 1999: **Jenks Farmer** on "Liberate Your Pansies! Winter Annuals with Bold, Beautiful Texture and Color"

N.C. Botanical Garden Fall Programs

Call 919-962-0522 for information.
UNC, Totten Center, Chapel Hill

October 10, 1999 at 3:00 p.m.: **Bobby J. Ward,** Book signing/reading of *A Contemplation Upon Flowers.* (Free)

November 6, 1999 at 9:30 a.m.: **Sue Hinson** & **Jean Wright on** "Color in the Fall & Winter Garden." (Fee charged)

November 13, 1999 at 9:30 a.m.: **Sue Hinson** & **Jean Wright** on "Using Evergreens in the Landscape." (Fee charged)

Fall Seedling Sale Success

My sincere thanks and appreciation are extended to Donna Maroni, Tom Sutton, Laddie Munger and the other chapter members who volunteered in setting up and running the plant sale at our September meeting. As a result we sold $820 of plants. The money will be used to fund chapter speakers, the newsletter, and other miscellaneous expenses. And a special thanks to chapter members who grew and donated plants.

—Marian Stephenson, Chapter Chair

NARGS Eastern Winter Study Weekend 2000

"Chasing the Blues"

January 28 to 30, 2000

Sheraton University Hotel
Syracuse, New York

Sponsored by the Adirondack Chapter of NARGS

Speakers include

Jim Archibald

Keith Lever

A. J. Richards

Nina Bassuk

Jane Grushow

Rick Lowenstein

Ludwig Schiessl

NARGS Western Winter Study Weekend 2000

"The Wild, Wild West"

February 25 to 27, 2000

The DoubleTree Hotel
Burlingame, Calif.
(near San Francisco Airport)

Sponsored by the Wester Chapter of NARGS

Speaklers include

Richard G. Turner, Jr.

Margery Edgren

Phyllis Gustafson

Panayoti Kelaidis

Bart O'Brien

G. S. Phillips

Roger Raiche

Wayne Roderick

Terry Sozanski

Stewart Winchester

Gentiana acaulis

Contact Registrar for further information:

George Erdman, Jr., NARGS Eastern WSW 2000
269 Bornt Hill Road
Endicott, NY 13760

(607) 748-3984; gerdman@binghamton.edu.

Registration fee is $150 if received by December 31, 1999

Contact Registrar for further information:

Elly Bade, NARGS Western WSW 2000
2699 Shasta Road
Berkeley, CA 94708

(510) 644-1656; bade@math.berkeley.edu

Registration fee is $135 if received by February 1, 2000

Plant Portrait . . .

Crocus medius

by Mike Chelednik

I think of fall the way most gardeners think of spring—as a time of renewal and growth. We have arguably the nicest weather in the South during the months of September, October and November. Gone are the days of high humidity, hot nights, and afternoon thunderstorms; instead we are treated to numerous days of what I term "Colorado weather"—stretches of cloudless, mild days with low humidity. The white and rose pink blooms of *Cyclamen hederifolium* dot the shadier parts of the woodland and plants such as *Arum italicum* and *Clematis cirrhosa* re-foliate, seemingly in defiance to the coming cold. Just about the time I have the first killing frost in my garden—usually the week prior to Thanksgiving—one of my favorite fall-blooming plants begins to put on a show, the lovely *Crocus medius*.

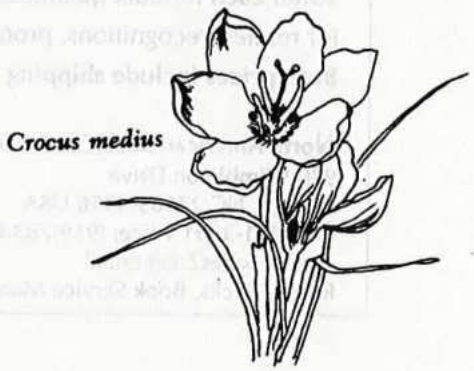
There are numerous species of autumnal crocus, but to my eyes none are more comely than *Crocus medius*. Native to the hills above the Mediterranean Sea in northwest Italy and extreme southeast France, the specific epithet, meaning "in between in size or shape," refers to its taxonomic station at the time of Linnaeus, when it was thought to share close affinities with *Crocus sativus* and *C. vernus*. Today, now that many, many more species have been identified, it is known that this species is most closely related to *C. nudiflorus*, *C. serotinus*, and *C. longiflorus*.

Blooming for me from mid-November through mid-December in most years, this species measures about 4" tall in bloom. The cup-shaped blooms are flashy indeed: a rich mauve with a darker "star" of lines radiating from the throat. The blooms are further enhanced by the stigmata, which are finely divided and a bright orange-red.

This species blooms without any foliage, which comes up much later, well into the new year. I grow mine through a mat of the gray-leafed Texas creeper, *Stemodia tomentosa*, which sets off the blooms of the crocus to perfection. The plant needs sun, and a well-drained sandy soil is generally advised, although I've seen plants growing in clay; a high-ish pH is usually also recommended.

Bulbs are fairly easy to procure, and are available from most of the higher end mass-market bulb suppliers such as McClure & Zimmerman and The Daffodil Mart. I've had plants in my garden for 5 to 6 years, and while they are not the most vigorous of the autumnal crocuses (the distinction of which would go to the semi-weedy *C. speciosus*), my plants have increased, some vegetatively, in the years I've had them. In any case the plants have held there own, which is all I feel is needed of most bulbs in the garden. This spring they even produced a few seed capsules.

[*Mike Chelednik lives and gardens in Greenville, N.C. He is the Piedmont Chapter program chairman.*]


Crocus medius

Upcoming Speakers for NARGS Piedmont Chapter

January 15, 2000
Nancy Goodwin
Hillsborough, North Carolina
"The Garden in Winter"

February 19, 2000
Bobby Ward
Raleigh, North Carolina
"Four Continents and a Camera:
A Year in Pursuit of Plants"

March 18, 2000
Pam Harper
Seaford, Virginia
"My Garden Throughout the Seasons"

April 15, 2000
Panayoti Kelaidis
Denver, Colorado
"Hot Rocks: Rock Gardening for the Southeast"

The Back Page . . .

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First Class Mail

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