

GROWING MEDITERRANEAN NATIVE ORCHIDS: SERAPIAS, OPHRYS AND ORCHIS

An Interview with Scott McGregor

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TODAY I'VE DRIVEN NORTH along the coast from San Diego County, California into Orange County to the lovely historic town of San Juan Capistrano sometimes known for the swallows that make their mud nests here in the spring and the beautiful Spanish architecture brought here by the Franciscan missionaries. Located close to the coast and bathed in Pacific Ocean breezes, it's the perfect place to grow orchids outdoors. Scott McGregor is the outdoor orchid grower I've come to interview.

Scott has been growing orchids most of his life. He began at the young age of 12 while growing up in St. Louis, Missouri where he claims he "was adopted by friends who belonged to an orchid society and was given a few plants since he didn't have a lot of money to buy them." He admits he also won one or two in an orchid auction, quickly becoming a society member and orchid hobbyist.

As many orchid enthusiasts do, over the years he experimented with many different species of orchids, learning by trial and error. When, through his employment, he was sent for a short time to the Netherlands, he had to give up his orchids, which he missed greatly.

Scott is now retired and has settled in San Juan Capistrano, a southern California town located in the five-mile-wide coastal belt. True to his convictions and interests in growing orchids outdoors, he has built an outdoor shade house to hold a new collection of orchids. Scott doesn't have a greenhouse, so his orchids are exposed to the elements. The only modifications he has made are to control the light exposure with shade cloth and to utilize additional eastern exposure areas around his house and porch for growing those orchids which benefit from direct, morning sun.

After trying his hand at growing a wide range of types of orchids, Scott's first native orchid species was a *Platanthera (Habenaria) cili-*

aris, an orange fringed species native to North Carolina, U.S.A. As a child, his family had friends who lived in Highlands, North Carolina and had *platantheras* growing all over their property. He says with delight, "It was just beautiful." On one family vacation, he uprooted one of them and managed to keep it alive for a few years. Living in St. Louis, he was able to provide the cool winter temperatures the orchid needed; nonetheless, the orchid did not survive. He understands now about "the symbiotic relationship native orchids have with the mycorrhiza (in the soil), which is something one needs to keep in mind when growing these types of orchids."

In the past few years, he has branched out to include growing the terrestrial Mediterranean native orchids which can be found in Europe and parts of northern Africa and Asia throughout the Mediterranean climate belt. Currently, he is growing *serapias*, *anacamptis*, *ophrys*, and *orchis*, as well as a variety of Australian terrestrial orchids that grow in a similar climate region.

Scott says he has "always been attracted to plants

which use mimicry and deception for pollination by insects. A number of flowers are similar to the female insect and even have the same pheromones to attract the male of the species... And so, they have interesting flower structures, colors, and shapes, some of them comically so." For this reason, he especially likes *ophrys*, commonly called the Bee Orchid, which have evolved to resemble female bees. He loves *ophrys* but finds them a bit difficult to grow. He has found that "*Ophrys sphegodes* subsp. *sphogodes* and *Ophrys sphegodes* subsp. *mammosa* are the easiest of the species to grow because they are early bloomers and are from the Southern parts of the Mediterranean, which make them a little bit better adapted to the climate in southern California. He finds those that are from the northern parts of Europe more challenging



Scott McGregor's Shade House.



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Platanthera ciliaris



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Serapias lingua



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Ophrys sphegodes subsp. *sphegodes*



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Ophrys fusca subsp. *fusca* in situ in calcareous soil.



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Orchis italica sprouting in Scott's growing medium.



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Rosette of leaves *Orchis italica* as the plant grows.



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Orchis italica

to grow because they are less adapted to growing outdoors in Southern California.

I asked Scott about his favorite European native orchid and, after a thoughtful pause, he settled on *Orchis italica*. "It has proven to be a very easy grower, blooms reliably and grows larger every year. The flowers are interesting and amusing and have a wonderful scent that smells like clover."

Culture

Foremost when attempting to grow terrestrials is to understand their life cycle. These orchids start as a tuber. In early autumn the tubers sprout, grow through the winter and bloom in spring. After blooming, their foliage dies back, and the tubers go dormant through summer. They grow in areas in which it rains during their growth period and is dry during their dormancy. Once understood, they become easy to grow.

Light: Mediterranean terrestrials such as serapias, ophrys, and orchis grow in open, grassy meadows and at the edge of low forests. Generally speaking, once they sprout in autumn, they receive direct morning sun. As the season progresses and grasses and shrubs leaf out, the orchids receive less direct sun, more dappled shade. To mimic these conditions, Scott grows his plants in spring in direct sunlight in an eastern exposure, and

once the sun progresses more directly overhead in summer, he provides more shade. He cautions, "You don't want them to bake." Scott claims that once the leaves have died back in late spring, you can even put them in the garage or a shed or other protected area because they are dormant during the summer.

Scott believes orchids are adaptable and that they can be grown in cold regions or under lights if you attempt to mimic their natural growing conditions. In colder areas, the orchids need to be brought indoors during the winter months and placed on a windowsill or table near a window where they will still be exposed to the winter light levels, but not too close to the window where it could get too cold. The same principals need to be followed when growing under lights: provide shorter hours of light and cooler nights during winter months. He says it's a matter of control. Scott believes that "a sunny window in Alaska is probably just fine. As long as you are willing to attempt to mimic their basic requirements, they can do quite well."

Water: Mediterranean terrestrials in situ are watered by rain, so they are acclimated to pure water. In cultivation, Scott says "water should be free of dissolved salts." Rainwater is best to use. If you use tap water that is high in dissolved salts use reverse osmosis or de-ionized water. Scott says, "even distilled water can be used." If none of these options is available and you do not have good tap water, then the pots should be flushed often to ensure there is no salt build-up.

When to water is critical when growing orchids that require a dormancy period. Generally, he does not water at all until Halloween or late fall here in the States. He says, "An easy way to remember when to water is to water from Halloween to Easter. If the tubers do sprout out before Halloween, you have a choice to make: you have to decide to either leave them on the dry side or water. The risk is that if you have a lot of hot days after you begin watering, the plants may go dormant again, which is bad and interrupts the natural cycle." In the spring when the leaves start to yellow, stop watering. The plant is going dormant; whether it's time or not, stop watering."

Temperature/Humidity: Scott says that he is lucky to live in Southern California which has a Mediterranean climate similar to the habitat of the native orchids that he grows. He finds that the ones that are adapted to the warmer, drier climates do best for him. Temperatures which are warm during the day and cool at night are best.

Some of these orchids can survive a short freeze if they are adapted to these conditions and, if you grow them in the ground, they are not growing close to the surface. However, if they are in pots, don't allow the temperatures to drop that low. In cold areas, bring the pots indoors.



Scott's plant *Ophrys speculum* subsp. *lusitanica* with a light top dressing.

Air Movement: Native Mediterranean orchids tend to grow in more open areas like meadows where there is good air movement. Good air movement is essential while the orchids are in leaf and growing.

Media: Scott recommends experimenting with mixes to see which ones work with your watering practices. It is essential to understand and imitate the soil conditions. The adjective "calcareous" describes soil that is partly composed of calcium carbonate; it contains lime and chalk and tends to have a pH level which is on the alkaline side.

"The medium needs to be largely inorganic so that it is fast draining and fast drying." His mix is 80% inorganic and 20% organic. For the inorganics, he recommends pumice or other heavier inorganics like lava or stone but does not recommend using a high percentage of perlite, because the pots tend to be too light and easily overturned. "You need some type of calcium-bearing component in the soil to provide the mineral component." This is the mix he uses for serapias and orchis.

In the case of ophrys, he adds marble chips because it is more pH balanced. Limestone or shells, such as oyster shells, are too alkaline to use. He uses about 10% marble chips in the mix for ophrys and other species which require a more highly calcareous soil.

For the organics, he uses 15-20% light seedling mix which includes some small bark and some fast draining

sterile potting mix such as remade cactus soil or fine grade seedling soil. These are not heavy soils like garden soil, are fast draining, and very fibrous. He is emphatic that it should not be peat moss because it is too acidic, or sphagnum moss because it retains moisture for too long. It needs to be something that will promote quick drying such as pumice stone which is an aerator and increases the capability of the potting mix to drain quickly.

Further, Scott recommends using white-colored plastic pots. "When terrestrials grow in the ground," he claims, "the soil around their roots has a lot of thermal mass that protects them from excessive temperatures. If you use a dark pot, it will absorb a lot of heat from the sun." Another tip from Scott is to use a top dressing of light-colored rock such as pumice to reflect the sun. He believes that with "white pots you can provide more sun sooner. This is especially true in late spring when some plants are still flowering. It's not good for the plant to bake in the sun."

Fertilizer: Calcareous soil is not highly rich in nutrients, so orchids that grow in this type of soil don't need heavy feeding. Scott uses the Michigan State University (MSU) fertilizer at $\frac{1}{4}$ - $\frac{1}{2}$ strength at half the frequency of the recommendation on the label.

If the pH needs to be adjusted, he adds an acidifier such as Miracle Grow Soil Acidifier. For the novice, he suggests "any fertilizer which is designed for acid-loving plants, such as for azaleas" and dilute the fertilizer to between $\frac{1}{4}$ - $\frac{1}{2}$ the strength recommended on the box. He likes to maintain a pH of 4 to 5 for the acid lovers and a pH of 6 to 7 for ophrys.

Repotting: Scott has struggled with this question. "At the end of the year, do you dump out the pot and look at what you have?" He's tried several approaches and found they do pretty well when repotting them every other year.

An interesting fact he notes is that "they will grow deeper and deeper into the pot the longer they are left alone." He thinks that's because in situ the "water seems to be deep in the soil and not near the surface, which is hotter, dryer, and parched." When repotting, he often finds the tubers at the bottom of the pot. In this case, he moves the tubers back to the middle of the pot. He has found that "If you don't do that, they might sprout out through the drainage holes." He sometimes measures the size of the tubers to determine how he is doing in growing them.

Caveats

1. Rot is the #1 enemy. It is important to have a fast draining potting mix so the pot does not retain moisture. Resist all temptation to water during the dormancy period. He has learned that "The best way to kill one of these orchids is to water at the wrong time."

2. Use good water. "If you don't have good municipal water and no access to reverse osmosis water or deionized water then collect rainwater." According to Scott, even distilled water is better than water with a high concentration of salt.
3. Don't over-fertilize. Calcareous, native soil is not high in nutrients. Over-fertilizing is stressful for the plants.
4. Be mindful when buying online. Scott finds that "There are many disreputable sources...who are violating international law. They are harvesting them in the wild. They are contributing to the destruction of the natural environment." He recommends buying from sources who are known to conserve plants through a known seed propagation program with proper import permits. Further, "Buy plants, not seeds." He has learned that "Unless you are an expert, seeds are a waste of money." Two sources he has successfully used are Popow Orchids (www.popow-orchids.com) and myorchids (www.myorchids.de).

At the closure of our discussion, Scott walked me around the property to see his growing areas. As he does, he admits to having some ups and downs in learning how to grow these native orchids. He tells me, "You can have a really bad year in which they don't bloom or grow many leaves, and yet the plant still makes a good-sized tuber. When conditions are not ideal, the plant preserves itself for a better year." He smiles when he says, "What's important is to have fun with them." Now that I know more about how to grow these beautiful, little gems, perhaps I will.*

About the Author



Phyllis S. Prestia started growing orchids once she retired as an educator and Middle School Principal and moved from New Jersey to sunny, Southern California. She is currently a member of the Editorial Board of the *Orchid Digest* and serves as Trustee for the American Orchid Society. Phyllis has been the President of the San Diego County Cymbidium Society and is the current President of the Cymbidium Society of America. Further, she is an Accredited Judge for the AOS the CSA, Inc. and frequently speaks to orchid societies.

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