

Erasanthe henrici by Brenda Oviatt and Bill Nerison

An Exceptional Challenge



BRENDA OVIATT

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PRIOR TO THE emergence of the Internet, ordering orchids was very different. We'd anxiously await catalogs in the mail and call in or mail our orders. More than once we sat at the table with other orchid friends salivating over a new catalog and as many reference books as we could find and made a list of what we should buy, culminating in a group order. It was fun and considerably more interesting than ordering electronically. One of *our* favorite catalogs to receive was from The Angraecum House. It was a listing of the plants available in the form of a black and white photocopy. The exciting part was the color page(s) that Fred Hillerman included, which would show a small selection of what was available. Oftentimes, a glass of red wine sat next to the plant (to relate scale and the intoxicating effect orchids have on some of us). A memorable offering was *Aeranthes henrici*, described as "The **KING** of the genus. This is truly a spectacular species of *Aeranthes*. The large flowers (the largest in the genus) have an unusual 'crab-like' shape that is eye-catching." We knew we wanted one.



Brenda Oviatt and Bill Nerison

The name *Erasanthe* is unfamiliar to some growers; this species is still commonly referred to as *Aeranthes henrici*. *Aeranthes* is Greek for air (*aer*) flower (*anthos*), which suits the genus beautifully. The species was first described by Friedrich Richard Rudolf Schlechter in 1925 (Schlechter 1925). Schlechter, who is estimated to have proposed 1,000 new species in the Orchidaceae alone, named this one in homage to Henri Alfred Perrier de la Bathie, a distinguished French scholar of the flora of Madagascar. The name change came in 2007 when it was determined that this species was morphologically different from the other species of *Aeranthes*, which was also supported by the results of molecular (DNA) analysis. The change was made by P.J. Cribb, J. Hermans, and D.L. Robert in 2007. Even when Fred Hillerman was describing *Aerth. henrici* in the 1980s, he said "Although the spur hangs straight down (in characteristically *Aeranthes* position) such a long spur is 'unaeranthean' and the flower is much thicker than in any other *Aeranthes*." As for the new name, well, notice that it's an anagram of the old one!

There are two forms of the species.



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[1] There is a real wow factor seeing *Erasanthe henrici* in bloom. Yes, this is actually a single plant in bloom. Ten flowers on two inflorescences! Grower: Botanica Ltd.

[2–3] These are substantial flowers although the back of the lip (above the spur) is translucent. The column has the appearance of a delicate mantis-head and the lip is fimbriate. Grower: Botanica Ltd.

Erasanthe henrici subsp. *henrici* is the typical form and is the type first described. It is best referred to as simply *Erasanthe henrici*. *Erasanthe henrici* subsp. *isaloensis* is an infraspecific taxon of restricted distribution. Its main differences are its smaller flowers, its triangular-acute bracts and its white flowers, which are flushed with green. All *Erasanthe* are native to Madagascar, *Erasanthe henrici*

being more widespread at elevations of 2,625–3,280 feet (800–1,000 m), while the subspecies *isaloensis* is restricted to Isalo canyons at lower altitudes.

Three AOS awards have been given to *Erasanthe henrici* — in the 70s and 80s. The first was a Certificate of Botanical Merit (the CBM was later split into today's two awards, the Certificate of Botanical Recognition [CBR] and the Certificate

Observations from the Field



KATHYRN E. THEISS

THE DISSERTATION OF Kathryn E. Theiss at the University of Connecticut focused on the ecology and conservation of *Erasanthe henrici*. She visited Madagascar eight times over her decade of study and we asked her to tell us some highlights and challenges of her time there.

“I think part of the reason *Erasanthe* is rare in cultivation is that it is pretty rare in Madagascar. There are less than 1,000 plants left in the wild and I focused on about 350 of them for my PhD. The major threats to the persistence of this species in the wild are applicable to most orchids in Madagascar and other tropical countries: the habitat is threatened by timber harvest for fuel and construction, and the species are threatened by collection for the international horticultural trade. My dissertation research focused on analyzing these threats through multiple angles: demography, reproduction, population genetics and economics. Some populations of *Erasanthe henrici* fall within the boundaries of protected areas; others have no formal protection. At one of the national parks where I worked, the tour guides are excited about orchids growing close to the trails. They can point out these orchids during tours, pleasing the tourists and resulting in better tips. They referred to me as “the orchid girl,” and asked me questions about everything from orchid ecology to English pronunciation. If I happened to be up in a tree while they were giving a tour, they would point out the new species of lemur to their tour group, which always got a laugh.

Long-term conservation is rarely successful in the absence of economic incentives. In the time between visiting an area in 2001 and again in 2008 I was unprepared (though warned) for the changes I would find. An international mining corporation was about to begin a large project that would destroy 90 percent of the local coastal forest. The newly created job opportunities had caused a surge in population, both Malagasy and “vazaha” (foreigners), to a region suffering years of drought. There were new banks, schools and a hospital but also traffic jams, pickpockets and prostitutes. A local botanist took me out to survey for orchids at one of the future mining sites. In less than a day I saw more than US\$1 million of orchids — orchids that have now been bulldozed along with the rest of the forest.

One of the factors that often contributes to people more heavily using natural resources, such as orchids, for income is political instability. In 2009, after a political coup, the president of Madagascar stepped down and the country had an interim political leader for five years. Since this interim leader was not elected democratically, Madagascar was excluded from the African Growth and Opportunity Act, which resulted in many job losses. Along with the political instability came economic instability — after multiple reports of violence against foreigners, I cancelled my 2009 field season. When I returned in 2010, there were a few changes to my normal protocols. It was no longer safe to travel by car at night between cities and armed cattle rustling, which is a long-time tradition in parts of Madagascar, was at an all-time high, making one of my field sites very dangerous to visit. That particular field season I was interested in gathering data on the nocturnal pollinators of *Erasanthe henrici*. In order to ensure the security of my research team, I hired armed “gendarmes” (regional policemen) from the local office. It took quite a while for me to explain to the police chief what I was doing, setting up big lights and a generator near the forest for the night, and why anyone, including a scientist, would want to do this. The gendarmes finally came with me, and I think they had a reasonably pleasant night in the tent while my field crew and I collected moths in between naps. Although I had heard many stories, my safety was never threatened by anything other than the normal malaria and intestinal parasites.” — Kathryn E. Theiss

of Horticultural Merit [CHM]) and then followed by two CHM's. There have been no awards given since 1984 and sadly, there are no registered hybrids under either *Aeranthes henrici* or *Erasanthe henrici*. We find this a bit surprising considering the size and unusual shape of the flower. Perhaps a hybrid with an easier-to-grow angraecum is in order?

CULTURE We have a few suggestions when choosing to grow *Erasanthe henrici*. First, we do NOT recommend this for novice growers. You need some experience with orchids before giving this one a try. Second, we highly recommend buying from a source that has grown them from seed, rather than getting one that has been removed from nature. Plants grown from seed tend to be easier to grow than collected ones, and more importantly, this is a species that is in danger of extinction in nature due to overcollecting and habitat destruction. Finally, before choosing to give this beauty a try, make sure your conditions are appropriate; these don't seem to tolerate less-than-ideal conditions for very long.

We grew our first plant from Fred Hillerman well and it bloomed for us — but it slowly declined over two years and finally died. We've spoken with, and read about others with a similar experience growing these. It may be that this species has a limited lifespan. We've had other angraecoids fade and die in a similar manner. If you're lucky, and don't give up on them as they decline, sometimes a new growth will emerge along the stem, replacing the dying portion. We've seen some astonishing recoveries by plants we were ready to give up on.

In reading and talking to others about growing *Erasanthe henrici*, three things are agreed upon. First, these plants don't like typical pot culture (in media in a plastic pot). Secondly, they require the cleanest water possible (reverse osmosis water would be ideal) and finally, they prefer intermediate to warm conditions to thrive (ours get a winter nighttime low of 58 F (14.4 C) and a daytime summer high of 96 F (35.6 C).

We are aware of only one commercial grower in the USA with these plants currently available: Orchids Limited in Plymouth, Minnesota. Years ago, Jason Fischer described a rather laborious process of adding and removing sphagnum moss pads to their mounted plants during the year in an attempt to mimic what they receive in nature. We contacted Jerry and Jason to see what has been working the best for them since then. They related



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JERRY FISCHER

that their greatest success is in or on terra cotta pots and in hanging baskets. In the pots, they use a mix of Orchinata bark and Growstone (a highly porous hydroponic medium made from recycled glass). In baskets they use a lining of Oregon green moss (a type of sheet moss collected from Oregon's coastal forests) filled in with medium-grade charcoal or Growstone. They fertilize their plants every fourth watering to prevent salt build-up.

On a sunny afternoon in October, we took light readings of the area where we grow our plants (they were in full bloom at the time). Outside in the bright sun, we had 9,370 footcandles (100,858 lux) of light. Where the *Erasanthe henrici*

[4] Most of the year you can't even tell what our plants are growing on, they're so thickly covered with Spanish moss (*Tillandsia usneoides*). On the "back" of this moss is 1-inch (2.54-cm) welded wire screen — open to the air. Grower: Botanica Ltd.

[5] Jason Fischer relates that their greatest success growing *Erasanthe henrici* is in plastic baskets hung on one side with a 45-degree angle slope so the leaves are a bit pendulous (like they'd be in nature). Grower: Orchids Limited.

grow the reading was 630 footcandles (6781 lux) or about 93 percent shade. At Orchids Limited they are grown in phalaenopsis conditions (1,200–2,000 fc [12,917–21,528 lux] or about 80–90 percent shade).

We grow our plants on cork plaques and though Jerry describes this as “hit-or-miss” for them, we grow significantly fewer orchids and grow a high percentage of our angraecoids successfully this way. We have them hanging on a screen, facing north. Through November, they have a thick layer of Spanish moss (*Tillandsia usneoides*) over their roots. We remove 80 percent of the moss each November, and then let it regrow. The main reasons for removal at this time each year are our predominantly cloudy winters and because the moss grows so well it can completely cover and smother the orchids.

Kathryn Theiss related to us that *Erasanthe henrici* subsp. *isaloensis* goes through an annual drought period that is severe. Its leaves completely curl up and she was impressed that the plant could come back each year. *Erasanthe henrici* is also subjected to drought but it is much less severe. It’s important to know this about the native habitat when trying to grow them well in your collection. Notice the similarity in the roots growing bare on the tree in Madagascar (no moss in sight) and the roots on the terra cotta pot. Their thick roots and fleshy leaves are adapted to the dryness of this growing situation. During this dry time, they still require some water though. The tricky part is keeping them dry — but not too dry — during their dormancy, and moist — but not too moist — during their wet season. Orchids that need distinctly different care during parts of the year can be challenging, especially when it’s not an unmistakable dormancy; i.e., a *Cycnoches* that has lost all its leaves. As Fred Hillerman stated so well “For those who delight in challenges, this is one that will bring great rewards when success is achieved.”

HOPE FOR SURVIVAL With just 1,000 plants left in their native habitat — a habitat that continues to disappear — and with continued collecting, the future of *Erasanthe henrici* does not look bright in Madagascar. Despite any mystique about having a wild-collected orchid, we all need to realize that this attitude may bring species to their extinction. It’s up to us, as collectors and growers, to further the efforts of ex situ propagation — breeding endangered species so that they’re available for purchase without having to be removed from nature. It is our hope



that someday their habitats will be safe and protected so that they can potentially be reintroduced. Until that time, we encourage everyone to share pollen, seed, information and encouragement when it comes to the reproduction of rare and endangered species (even if they’re not angraecoids)!

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- Schlechter, F.F.R., 1925. *Aeranthes henrici*. *Repertorium Specierum Novarum Regni Vegetabilis* 33:278. 1925.

Additional Resources

- Hillerman, F.E., and A.W. Holst. 1986. *An Introduction to the Cultivated Angraecoid Orchids of Madagascar*. Timber Press, Portland.

[6] Jerry Fischer shows how well the roots cling to terra cotta pots and he sometimes mounts the plants on the *outside* of the pot! Notice how similar this appears to the plants’ roots on a tree in Madagascar (photo 7). Grower: Orchids Limited.

[7] In Madagascar plants typically grow on tree trunks less than 13 feet (4 m) from the ground and can be found growing on everything from tree ferns to *Pandanus*. Notice Kathryn’s metal tag — it’s the marker on one of her study plants.

<http://www.africanorchids.dk/>
https://it.wikipedia.org/wiki/Erasanthe_henrici
<http://www.theplantlist.org>

Acknowledgments

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— *Brenda Oviatt is an artist and Bill Nerison is an architect. They live on the Clark Fork River in Missoula, Montana, (a corner of paradise) with their daughter Marisa, son Tristan and an assortment of animals. They've been growing orchids together for 31 years and in that time have grown in many settings. For the last 11 years, their orchid growing has focused on the ex situ propagation of endangered angraecoids and the education of hobbyists and growers (billn@bresnan.net, website: www.botanicaltd.com).*



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