Date: Sat., January 11, 2014
Time: 1:30 Informal “talk story”
2:00 Meeting starts
Place: Kamana Senior Center,
127 Kamana St., Hilo
Note: we are in the meeting room to the right of the usual room.
Speaker: Ron Kaufmann
Topic: Conserving Orchids In The Wild

Orchid conservation is an issue that isn’t going away. Tropical rain forest, the native habitat of most orchids, is being destroyed at an alarming rate, resulting in the disappearance of the animals, birds, insects, and plants, including orchids, that live there.

Well, as Mark Twain said, everyone talks about the weather, but no one does anything about it. So is anyone doing anything about conservation?

The answer is yes. The Orchid Conservation Alliance (OCA) is an organization whose focus is specifically on preserving orchid habitat. Our speaker, Ron Kaufmann, is a founding director of OCA. He will tell us what OCA has been doing to protect orchids in the wild. Ron is a professor of Marine Science and Environmental Studies at the University of San Diego. He has been growing orchids for nearly 20 years and has a diverse collection of mostly species.

If you’re curious about where the orchids that we grow come from, and how we can save them, don’t miss this meeting!

To find out more about OCA, visit their web site www.orchidconservationalliance.org.
December AOS Judging Awards

Photos by Glen Barfield

Left: *Laelia anceps* ‘Kathleen’ AM/AOS, exhibited by Orchid Eros.

Right: *Paphiopedilum* Lippewunder ‘Joyce’ AM/AOS, exhibited by Hilo Orchid Farm.

Left: *Paphiopedilum* Stella Scope AQ/AOS, exhibited by Lehua Orchids.
Right: *Paphiopedilum farrieanum* ‘Red Dragon’ AM/AOS, exhibited by Hilo Orchid Farm.
What Do The Awards Mean?

AOS flower quality awards are given to orchid species or hybrids based on a 100-point scale.

- **HCC** (Highly Commended Certificate) – for an orchid scoring 75 to 79 points.
- **AM** (Award of Merit) – for an orchid scoring 80 to 89 points.
- **FCC** (First Class Certificate) – for an orchid scoring 90 points or more.
- **AQ** (Award of Quality) – awarded to a cross exhibited as a group of at least 12 different clones.

AOS cultural awards are given to the grower, not the plant, for growing a well-flowered specimen plant.

- **CCM** (Certificate of Cultural Merit) – for a specimen plant scoring 80 to 89 points.
- **CCE** (Certificate of Cultural Excellence) – for a specimen plant scoring 90 points or above.
Pictures from the Holiday Party

Last month’s Holiday Party and Auction was quite a success. The food was good, the company was good, and the auction raised the most money for our Society in years, thanks to the generous donations of high-quality plants by our commercial growers. We also want to thank our peerless auctioneer, Glen Barfield, and to everyone who volunteered to help make the event a success.

Left: Auctioneer Glen Barfield works the crowd. Right: Attendees paying close attention to the bidding. Photos by Julie Goettsch.

Orchid Stories

Darwin’s Orchid

After Charles Darwin published *The Origin of Species*, his groundbreaking book setting forth the theory of evolution, his next book was, of all things, a book on orchids, called *On the Various Contrivances By Which Orchids Are Fertilised By Insects*. Was this the work of a dilettante, flitting from one subject to another? Not at all. In fact, this book presents supporting evidence for the theory of evolution. Darwin happened to pick orchids as the subject, perhaps because orchids were popular in Victorian England.

I have read this book, but I don’t recommend it, because frankly, it’s very dull – descriptions of minute flower structures of species after species, genus after genus, for 300 pages. But there is one passage that has become famous:

“The *Angraecum sesquipedale*, of which the large six-rayed flowers, like stars formed of snow-white wax, have excited the admiration of travellers in Madagascar, must not be passed over. A green, whip-like nectary of astonishing length hangs down beneath the labellum. In several flowers sent me by Mr. Bateman I found the nectaries eleven and a half inches long, with only the lower inch and a half filled with nectar. What can be the use, it may be asked, of a nectary of such disproportionate length?”

Darwin went on to explain that there must exist a moth with a tongue at least ten inches long that pollinates the flower. He found that if a moth merely inserted its thin proboscis into the nectary (the nectar spur or tube), it would not remove the pollen; the moth needed to actually press its head up against the flower in order for the orchid to be pollinated. The orchid forces the moth to do that by keeping the nectar at the bottom of the tube, so the moth has to insert its tongue as far as it can.

Now comes the interesting evolutionary observation. Darwin knew that in all creatures, variation occurs that can be inherited, though he didn’t know why (we now know it’s due to genetic mutations). He reasoned that some of the moths that pollinate this orchid may have shorter tongues and some longer. The ones with longer tongues will be able to reach more food, so more of them will survive. And some plants of this orchid species may have shorter nectar spurs and some longer. Remember that if the moth doesn’t stick its tongue all the way in, the orchid doesn’t get pollinated. So only the orchids with the longer spurs will set seed. The result is a kind of “arms race”, where over time, both the moth’s tongue and the orchid’s spur keep getting longer and longer. This idea of two species evolving together is now called co-evolution. Separately, the orchid’s long spur and the moth’s long tongue just seem silly. Together, in the light of the theory of evolution, everything makes sense.

Some entomologists ridiculed Darwin for predicting a moth with a ten-inch tongue, but twenty years after Darwin’s death, the moth was found. In 1992, 130 years after Darwin predicted it, the moth was finally observed pollinating *Angraecum sesquipedale*, now fittingly called Darwin’s orchid.

Larry Kuekes

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**CALENDAR OF ORCHID EVENTS**

*The following events are held at Kamana Senior Center, Hilo*

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<thead>
<tr>
<th>Date</th>
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<tr>
<td>Jan. 11</td>
<td>1:30</td>
<td>Hilo Orchid Society meeting</td>
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<td>4:00</td>
<td>AOS Judging</td>
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Angraecum sesquipedale with its nearly foot-long long nectar spur. Photo by Larry Kuekes.
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