

Epidendrum- Boring???



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July 2018



Reed Stem Hybridization

Key Historical Hybrids



Epi. Hokulea



Epi. Joseph Lii

Epi. cinnabarinum



Epi. Orange Glow

Epi. cinnabarinum



Epi. O'Brienianum

Epi. cinnabarinum



Epi. jamiesonis

Epi. radicans



Epi. cinnabarinum

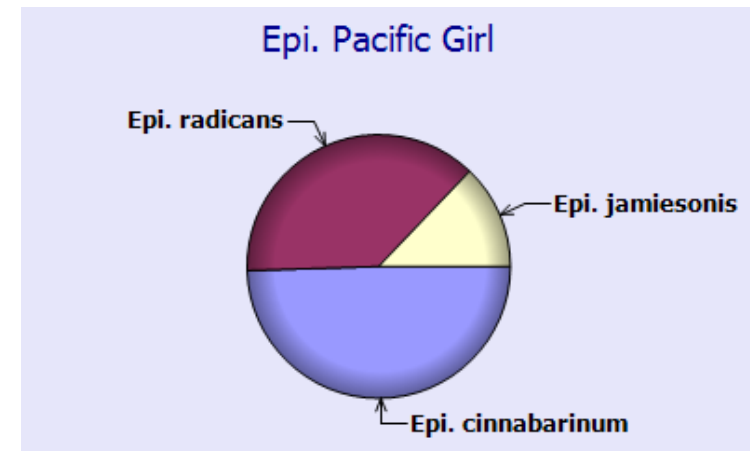
Epidendrum – Reed Stem

KRV Database

- To understand the general comments that I had heard ('Boring', limited FCCs, unknown heritage, etc.), I focused on two key hybridizers
 - Cal-Orchids (James Rose), 115+ registered hybrids ('Pacific' Hybrids)
 - M. and K. Inamine of Miura Valley (Japan), 160+ registered hybrids ('Valley' Hybrids)
 - Total 275+ Epidendrum hybrids (almost 50% all Epidendrum hybrids, 587)
- Of these 275+ hybrids, only 6 have unknown heritage at ANY level
 - 5 are progeny of Epi. Yoko Yokohama, parents unknown
- There has been extensive use of what I am calling 'in-line' family breeding



Epi. Pacific Girl
'Primavera' AM/AOS
Mar 2003, NS 4.4 x 3.8 cm
19 flowers, 5 buds, 1 inflor.

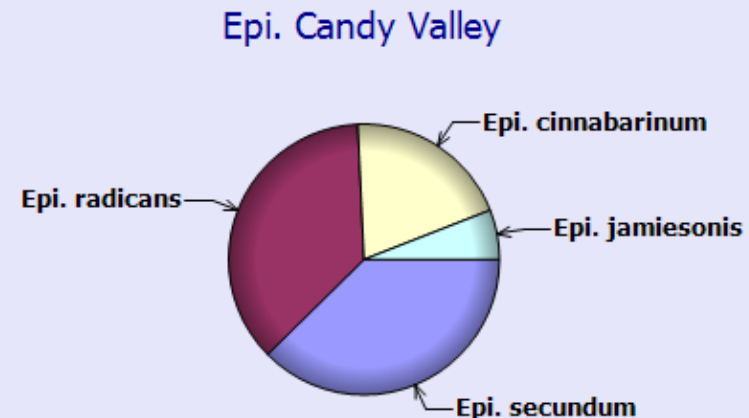


Epidendrum – Reed Stem KRV Database

- Two basic groupings
 - Use of 3 species, 125+ hybrids
 - *Epi. cinnabarinum*
 - *Epi. jamiesonis*
 - *Epi. radicans*
 - Use of 4 species (same as above plus), 150+ hybrids
 - *Epi. secundum*



Epi. Candy Valley
'Ice Candy' AM/AOS
May 2015, NS 3.4 x 3.6 cm
38 flowers, 9 buds, 2 inflor.



Epidendrum – Reed Stem

Four Species in heritage



Epi. cinnabarinum
40 flowers per inflor.

NS 6.4 cm

Canes 1.2 m

Inflor. 0.7 m

Warm growing



Epi. jamiesonis
40 flowers per inflor.

NS 2.0 cm

Canes 0.5 m

Inflor. 1 m



Epi. radicans
40 flowers per inflor.

NS 2.5 cm

Canes 0.6 m

Inflor. 0.3 m

Cold tolerant



Epi. secundum
35 flowers per inflor.

NS 2.5 cm

Canes 0.7 m

Inflor. 0.5 m

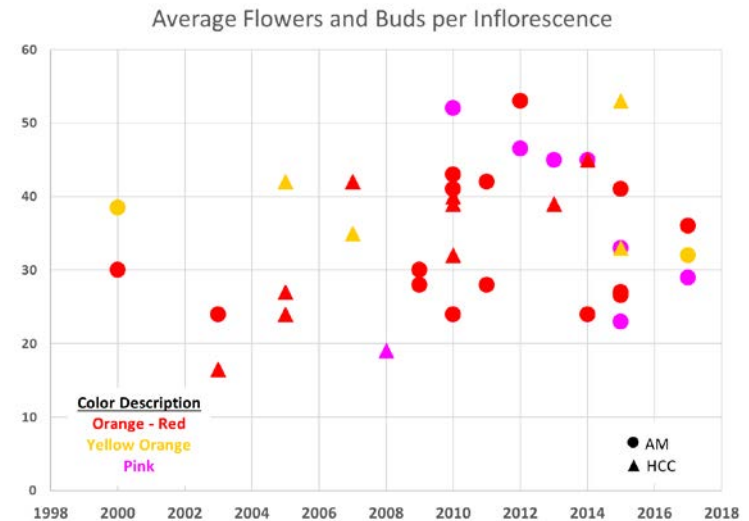
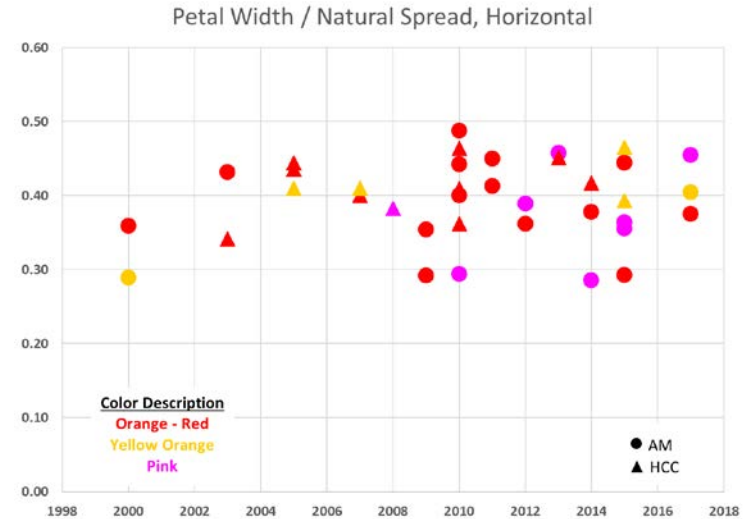
MANY varieties
(dwarf form)

Blooms year-round

Cold tolerant

What to look for in Judging today's reed stem Epidendrums

- Use the General Scale
- Along with the basic format considerations:
 - Full and flat segments
 - Flat lip
 - Clear color
 - Flower size
- Also look at (+/- points)
 - Arrangement, the head of flowers should tend towards a nice round ball
 - Count of the flowers
 - Flowers to be touching but the flowers should be visible
 - The orientation should be consistent



Personal communication
Arthur Pinkers

Four Most Recent Pacific South Judging Area Awardees



Epi. Pacific Hot Head
'Cherub' AM/AOS
Nov 2017, NS 4.0 x 4.3 cm
(Epi. Pacific Heat x
Epi. Pacific Pepper)
83 pts.



Epi. Pacific Trek
'Cantelope' AM/AOS
Jul 2017, NS 4.7 x 4.8 cm
(Epi. Pacific Padre x
Epi. Pacific Crest)
85 pts.



Epi. Pacific Islander
'Mango' AM/AOS
Jul 2017, NS 4.4 x 5.0 cm
(Epi. Pacific Peacock x
Epi. Pacific Redhots)
80 pts.



Epi. Pacific Beauty
'Arnilicious' AM/AOS
Jun 2015, NS 4.1 x 4.4 cm
(Epi. Pacific Mulberry x
Epi. Pacific Conquistador)
81 pts.

Why has there never been an FCC/AOS awarded to a 'modern' reed-stem Epidendrum?

One FCC/AOS to a reed stem Epidendrum:

Epi. Hokulea 'Mackie' FCC/AOS

Mar. 2000, NS 4.5 x 5.2 cm

No picture

'Sixty-five flowers and 17 buds blooming symmetrically on one inflorescence; flowers blooming in one massive head forming a perfect ball of flowers; flowers large and iridescent red-orange; lip fimbriated, yellow with deep red spots on side and inside half of lip; judges felt that this clone has the largest head of flowers seen to date of Epi. Hokulea.'

Personal comment: To be considered for an FCC/AOS, beside outstanding form and color, a flower / plant may need a 'WOW' factor to set it apart from prior awardees.

Select Epidendrum Species

| Species marked with a * are used the most in hybridization | | | | | | Progeny | AOS Awards | | | | | | | | | | |
|--|-----------------|---------------|----------------------------------|--------------|---------------|----------|------------|----|-----|----|----|----|-----|-----|-----|-----|-------|
| Kew Name | Group | Subgroup | Habitat, Country | Temp | Season | F1/Total | FCC | AM | HCC | JC | AD | AQ | CCE | CCM | CHM | CBR | Total |
| Epidendrum centropetalum | Oerstedella | Centropetalum | Mexico to Panama | Warm | Winter | 0/0 | | | 1 | | | | 2 | 7 | | | 10 |
| Epidendrum ciliare | Coilostylis | | Mexico to Peru, Antillies | Cool to Warm | Yearround | 53/54 | 3 | 7 | 6 | 2 | | | 3 | 24 | | | 45 |
| Epidendrum cinnabarinum* | | | Brazil, Venezuela | Cool to Warm | Summer | 48/413 | | 1 | | | | | | | | | 1 |
| Epidendrum cristatum | Cristatum | Cristatum | Mexico to Peru | Cool to Warm | Summer | 7/7 | | 4 | 3 | 1 | | | 1 | 5 | | 1 | 15 |
| Epidendrum ilense | Jatunsachuanum | | Ecuador | Warm | Yearround | 29/33 | | 1 | 1 | | | | | | | | 2 |
| Epidendrum jamiesonis | Secundum | Elongatum | Ecuador | Cold to Cool | Winter-Spring | 6/421 | | | | | | | | | | | 0 |
| Epidendrum magnoliae | Magnoliae | Magnoliae | North Carolina to Mexico | Cool to Warm | Summer-Fall | 54/59 | | | | | | | 4 | | | | 4 |
| Epidendrum medusae | Nanodes | | Ecuador | Cool to Warm | Summer | 3/3 | | 2 | 3 | | | | 1 | 7 | | 1 | 14 |
| Epidendrum parkinsonianum | Coilostylis | | Mexico to Panama | Cool to Warm | Winter-Summer | 17/17 | | 2 | 6 | 2 | | | 3 | 15 | | 2 | 30 |
| Epidendrum peperomia | Porpax | | Mexico to Peru, Brazil | Cool to Warm | Fall | 1/1 | | | 1 | | | | 1 | | | | 2 |
| Epidendrum porpax | Porpax | | Mexico to Venezuela | Cool to Warm | Fall-Winter | 8/8 | | 1 | 1 | 1 | | | 2 | 14 | 1 | 1 | 21 |
| Epidendrum pseudepidendrum | Pseudepidendrum | | Costa Rica to Panama | Warm to Hot | Spring | 56/115 | | 7 | | | | | 4 | 1 | | | 12 |
| Epidendrum radicans* | Secundum | Calanthum | Mexico to Colombia, Cuba | Cool to Warm | Winter-Spring | 50/463 | | | | 1 | | | 1 | | | | 2 |
| Epidendrum secundum | Secundum | Secundum | Bolivia-Guyana, Antilles, Brazil | Cool to Warm | Yearround | 24/172 | | 2 | | | | | 2 | | | 1 | 5 |
| Epidendrum stamfordianum | Psilanthemum | | Mexico to Colombia | Warm | Winter-Spring | 54/63 | | 18 | 10 | 4 | | 1 | 19 | 2 | 3 | | 57 |

Only 84 of the 1643 (5%) known species used in hybridization

Epidendrum species AM awardees 2017 - today



Epi. laucheanum
'Alisant' AM/AOS
Aug 2017, NS 1.4 x 1.4 cm

Epi. sobralioides
'Rodrigo Castillo' AM/AOS
Jan 2018, NS 6.0 x 4.8 cm



Epi. melanoporphyreum
'Hangry Birds' AM/AOS
Jul 2017, NS 4.0 x 3.6 cm

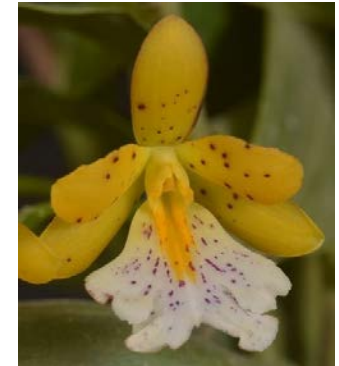


Epi. wallisii
'Cali Bianchi-1711' AM/AOS
Nov 2017, NS 3.5 x 3.5 cm



Epi. melanoporphyreum
'Diamond Orchids' AM/AOS
Mar 2017, NS 2.5 x 2.9 cm

Epi. wallisii
'Francini Camila' AM/AOS
Mar 2017, NS 3.1 x 3.9 cm



Epi. peperomia
'Natural World' AM/AOS
Oct 2017, NS 2.8 x 3.6 cm



Back-up

Epidendrum – General

- Genus
 - 1643 species
 - 9 natural hybrids
- Hybridization
 - 568 Epidendrum hybrids
 - 131 Primary hybrids (23.1%)
 - 459 intergeneric hybrids
 - 1027 hybrids
- Cultural
 - Mostly sympodial epiphytes, but also includes terrestrials and uncommon lithophytes
 - Found in wet to dry, low to mid elevations
 - Wide range of habitats but always with very good drainage.
- Exclusively New World, temperate and tropical
 - North Carolina to Northern Argentina



Epidendrum – General, cont'd

- Flowers vary from excessively small (?Epi. quacamayense, NS 2 mm) to quite large (?Epi. nocturnum, NS 16.2 cm)
- Distinctive characteristics
 - Slit rostellum
 - Semiliquid viscidium produced
 - Most species have
 - Lip united to the column, for forming a nectary tube that penetrates the pedicel
 - Four pollinia
- The genus Epidendrum was used by early botanist and writers to place and describe many of the new world epiphyte type plants.
- Eric Hagsater and et.al. have taxonomy divided the genus Epidendrum into around 100 groups and subgroups. These groups are provisional and have not been formally described as yet
- Focus
 - Initially look into the classic reed stem Epidendrums
 - Select F1 (species x species) hybridization



Reed Stem Hybridization

Key Primary Hybrids – Epi. O’Brienianum



- 1888 by Harry Veitch
- 37 F1 and 417 total progeny
- No awards
- Has recently gained some notoriety as it has been listed as a nuisance plant, bordering on noxious weed status in N. Australia and Hawaii because, after extensive landscape use, it has actually naturalized to the extent of being invasive!



Epi. jamiesonis



Epi. radicans

Reed Stem Hybridization

Key Hybrids – Epi. Orange Glow



Epi. Orange Glow
(Epi. O'brienianum x Epi. cinnabarinum)

- 1953, Ernest Iwanaga of Hawaii
- 21 F1 and 368 total progeny
- No awards
- Plus
 - Increased flower size
 - More upright growing habit
- Negatives
 - Canes up to four feet tall
 - Cannot take cooler temperatures
- Comments
 - Generate an Hawaiian 'industry' as garden plants
 - Crosses were made but did not carry registered names
- Two key crosses for today's reed stem Epidendrum crosses were registered

Reed Stem Hybridization

Key Hybrids – Epi. Joseph Lii



Epi. Joseph Lii
'Ruby' AM/AOS
Mar 2006, NS 4.8 x 4.7 cm
(Epi. Orange Glow x Epi. cinnabarinum)

- 1983, Richella
- 16 F1 and 349 total progeny
- 8 AOS awards (4 AMs, 3 HCCs, 1 CCM)

| Genetic Composition: 3 Species | | | | | | | | |
|--------------------------------|-------|--------------|-----|--------|------|-------|--------|--------|
| Gen. | Genus | Name | Nds | Share. | Awds | Offs. | Flwrs. | N.Spr. |
| 1 | Epi | cinnabarinum | 2 | 75.0% | 3 | 48 | 29.3 | 5.1 |
| 3 | Epi | jamiesonis | 1 | 12.5% | 0 | 6 | | |
| 3 | Epi | radicans | 1 | 12.5% | 3 | 50 | 22.6 | 2.9 |

Reed Stem Hybridization

Key Hybrids – Epi. Hokulea



- 1986 by Puanani
- 26 F1 and 59 total progeny
- 18 AOS awards (1 FCC, 8 AMs, 5 HCCs, 4 CCMs)
 - No photo of Epi. Hokulea 'Mackie' FCC/AOS, Mar 2000, NS 4.5 x 5.2 cm.

Epi. Hokulea
 'Super Red' AM/AOS
 Apr 2004, NS 4.4 x 4.7 cm
 (Epi. Joseph Lii x Epi. cinnabarinum)

Genetic Composition: 3 Species

| Gen. | Genus | Name | Nds | Share. | Awds | Offs. | Flwrs. | N.Spr. |
|------|-------|--------------|-----|--------|------|-------|--------|--------|
| 1 | Epi | cinnabarinum | 3 | 87.5% | 3 | 48 | 29.3 | 5.1 |
| 4 | Epi | jamiesonis | 1 | 6.3% | 0 | 6 | | |
| 4 | Epi | radicans | 1 | 6.3% | 3 | 50 | 22.6 | 2.9 |

Reed Stem Hybridization

Key Primary Hybrid, Epi. Princess Valley



Epi. Princess Valley
'Nathan Kwar' HCC/AOS
Mar 2009, NS 3.5 x 3.6 cm

- 1994, M. Inamine
- 11 F1 and 46 total progeny
- 2 HCC/AOS awards



Epi. secundum



Epi. radicans

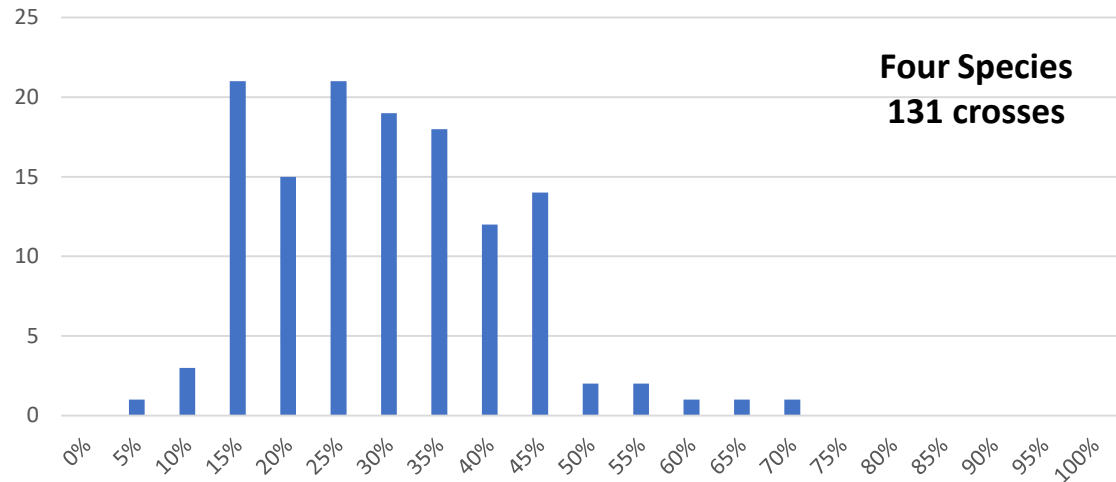
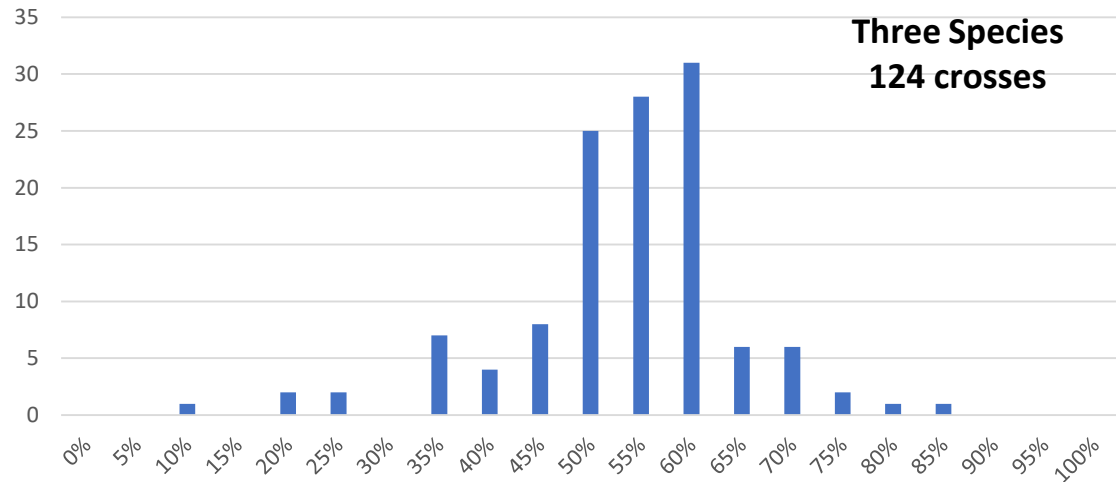
Epidendrum – Reed Stem

Three/Four Species

Heritage Percentage Distribution



Epi. cinnabarinum
 40 flowers per inflor.
 NS 6.4 cm
 Canes 1.2 m
 Infleur. 0.7 m

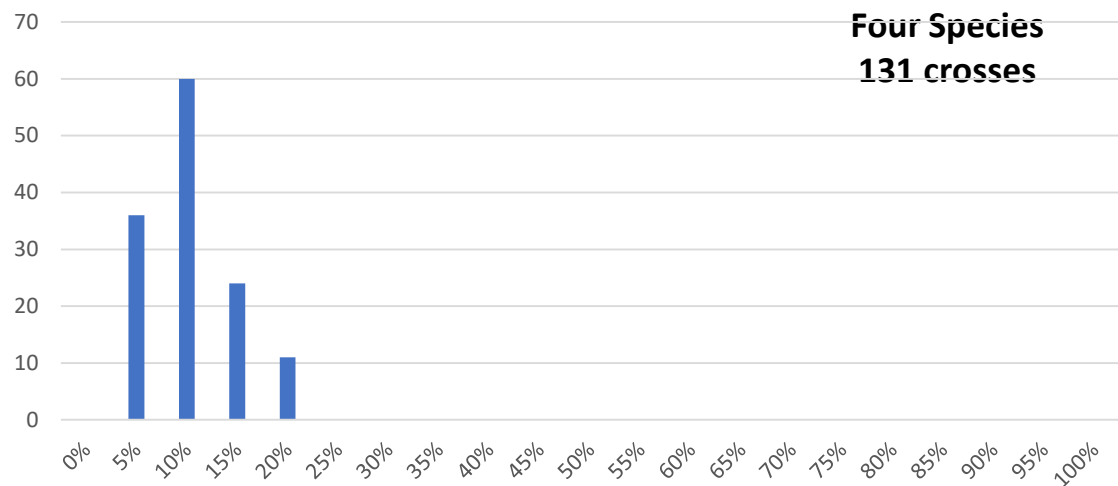
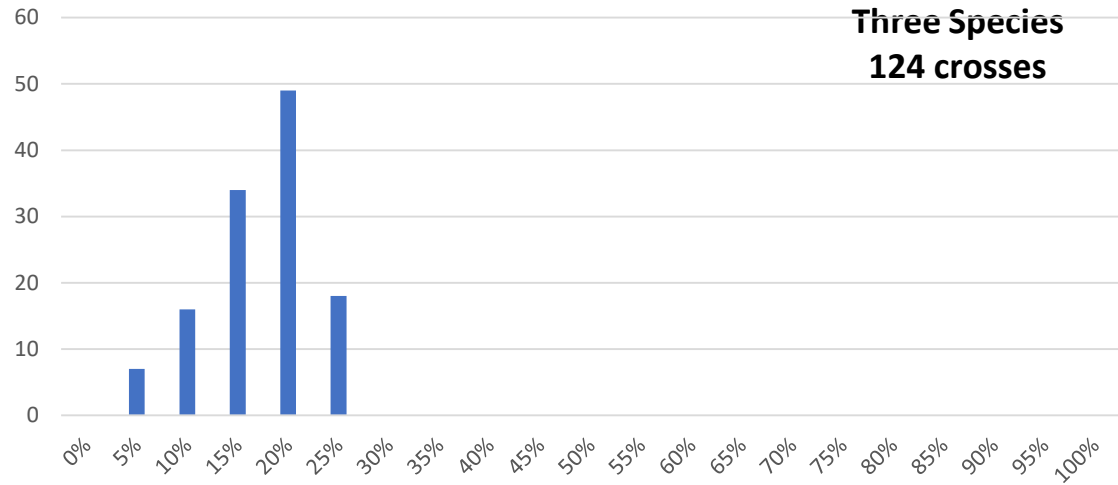


Epidendrum – Reed Stem

Four Species in heritage



Epi. jamiesonis
40 flowers per inflor.
NS 2.0 cm
Canes 0.5 m
Inflor. 1 m

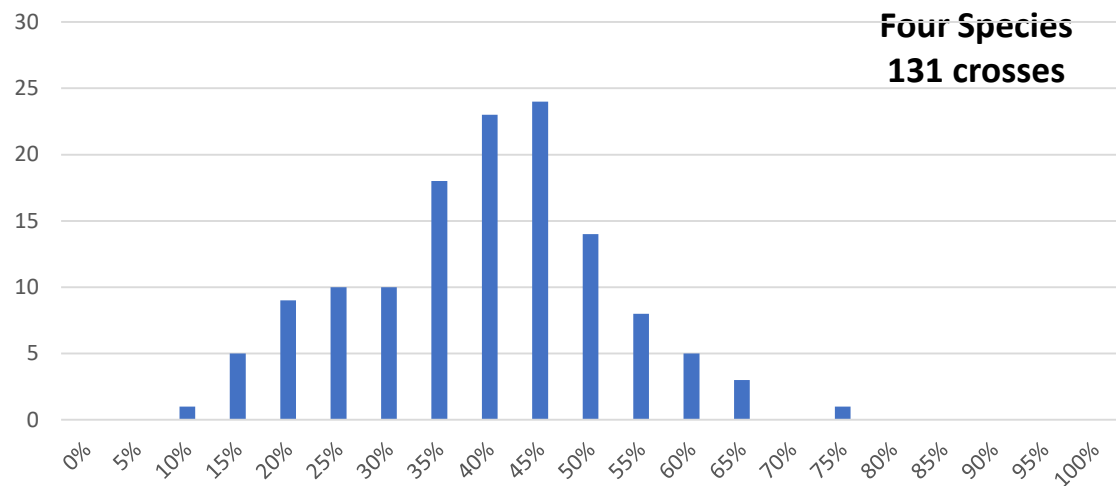
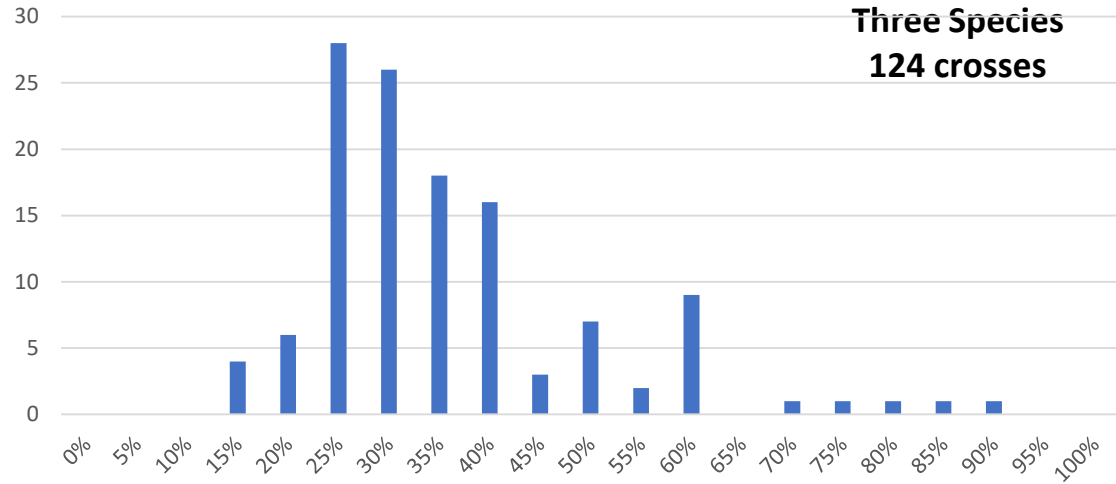


Epidendrum – Reed Stem

Four Species in heritage



Epi. radicans
40 flowers per inflorescence.
NS 2.5 cm
Canes 0.6 m
Inflorescence 0.3 m
Cold tolerant

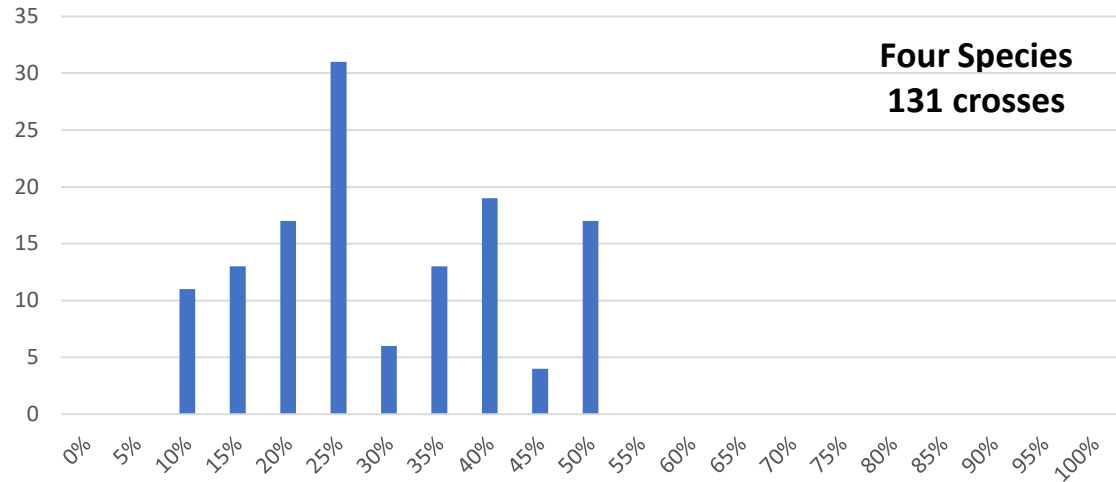


Epidendrum – Reed Stem

Four Species in heritage



Epi. secundum
35 flowers per inflorescence.
NS 2.5 cm
Canes 0.7 m
Inflorescence 0.5 m
MANY varieties
(dwarf form)
Blooms year-round
Cold tolerant



Three of the Four species from the same Group

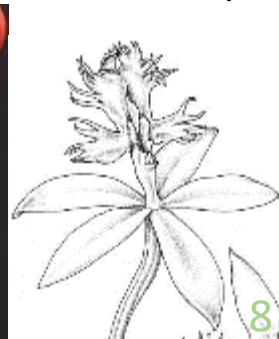
(*Epidendrum cinnabarinum* the exception)

- Group Secundum: Characterized by the caespitose (Growing in small dense clumps or tufts) habit, the numerous coriaceous (Leathery in texture; thick and tough) leaves, the generally elongate peduncle (Stalk of a flower-cluster) to pluriracemose (many branched) inflorescence with brightly colored flowers generally pollinated by hummingbirds, with the caudicles of the pollinarium granulose (Composed of or appearing as if covered by minute grains), and the tetrads (group of four) appearing like a loose stack of roof tiles. There are three subgroups:
 - Calanthum – Characterized by the bicallose with a central, narrow, long, wavy keel, the column is apically high and the anther is generally decumbent (reclining but with the growing end upright)
 - Elongatum – Characterized by the complicated, tuberculose ('warts) callus on the lip, with a low column, with an incumbent anther.
 - Secundum (Calanthum) – No description



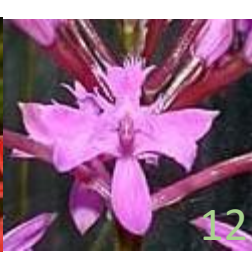
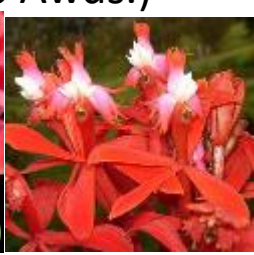
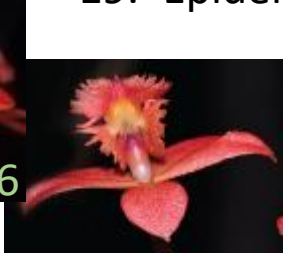
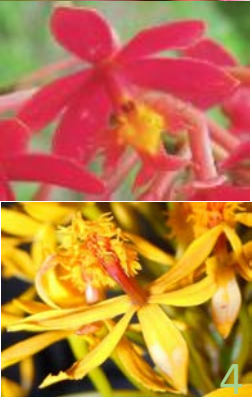
Group Secundum, SubGroup Calanthe

1. *Epidendrum apatotylosum* (0 offs., 0 Awd.)
2. *Epidendrum baumannianum* (1 offs., 0 Awd.)
3. *Epidendrum calanthe* (7 offs., 5 Awd.)
4. *Epidendrum flexuosum* (10 offs., 3 Awd.)
5. *Epidendrum haematanthum* (11 offs., 0 Awd.)
6. *Epidendrum hawkesii* (0 offs., 0 Awd.)
7. ***Epidendrum ibaguense* (45 offs., 5 Awd.)**
8. *Epidendrum mimopsis* (0 offs., 0 Awd.)
9. *Epidendrum odontopetalum* (0 offs., 0 Awd.)
10. *Epidendrum persimile* (0 offs., 0 Awd.)
11. ***Epidendrum radicans* (463 offs., 3 Awd.)**
12. *Epidendrum revertianum* (0 offs., 0 Awd.)
13. *Epidendrum rubroticum* (0 offs., 0 Awd.)



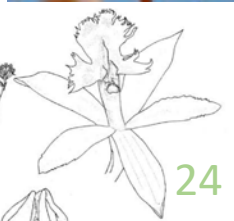
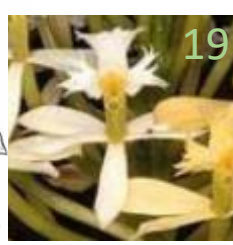
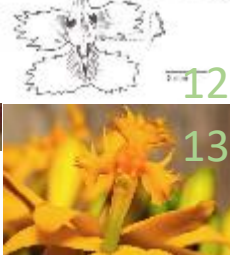
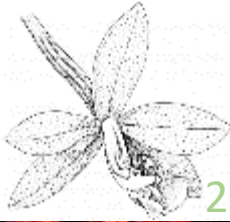
Group Secundum, SubGroup Elongatum

1. *Epidendrum acroscopeum* (0 offs., 0 Awds.)
2. *Epidendrum arachnoglossum* (21 offs., 0 Awds.)
3. *Epidendrum aramoense* (0 offs., 0 Awds.)
4. *Epidendrum aura-usecheae* (0 offs., 0 Awds.)
5. *Epidendrum brachycorymbosum* (0 offs., 0 Awds.)
6. *Epidendrum catillus* (3 offs., 1 Awds.)
7. *Epidendrum coroicoense* (0 offs., 0 Awds.)
8. *Epidendrum corymbosum* (0 offs., 0 Awds.)
9. *Epidendrum elongatum* (syn *Epi. secundum*)
10. *Epidendrum igneum* (0 offs., 0 Awds.)
11. *Epidendrum imperator* (0 offs., 0 Awds.)
12. ***Epidendrum jamiesonis* (421 offs., 0 Awds.)**
13. *Epidendrum ptochicum* (0 offs., 0 Awds.)
14. *Epidendrum quinquecallosum* (0 offs., 0 Awds.)
15. *Epidendrum quitensium* (0 offs., 0 Awds.)
16. *Epidendrum reflexilobum* (*Epi. tricarinatum*, 0 offs., 0 Awds.)
17. *Epidendrum susannae* (0 offs., 0 Awds.)
18. *Epidendrum tulcanense* (0 offs., 0 Awds.)
19. *Epidendrum vinosum* (0 offs., 0 Awds.)



Group Secundum, SubGroup Secundum [Calanthum]

1. *Epidendrum ackermanii* (0 offs., 0 Awds.)
2. *Epidendrum azulense* (0 offs., 0 Awds.)
3. *Epi. caquetanum* (0 offs., 0 Awds., no photo)
4. *Epidendrum cochlidium* (1 offs., 1 Awds.)
5. *Epidendrum denticulatum* (2 offs., 0 Awds.)
6. *Epidendrum franckei* (0 offs., 0 Awds.)
7. *Epidendrum gracilicaule* (syn *Epi. secundum*)
8. *Epidendrum lacerum* (0 offs., 0 Awds.)
9. *Epidendrum laurelense* (0 offs., 0 Awds.)
10. *Epidendrum macrocarpum* (7 offs., 3 Awds.)
11. *Epi. macrocyphum* (0 offs., 0 Awds., no photo)
12. *Epidendrum magalhaesii* (0 offs., 0 Awds.)
13. *Epidendrum melinanthum* (0 offs., 0 Awds.)
14. *Epi. mimeticum* (0 offs., 0 Awds., no photo)
15. *Epidendrum mimopsis* (0 offs., 0 Awds.)
16. *Epidendrum portokalium* (0 offs., 0 Awds.)
17. *Epidendrum ptochicum* (0 offs., 0 Awds.)
18. *Epidendrum rauhii* (0 offs., 0 Awds.)
19. *Epidendrum schistochilum* (0 offs., 0 Awds.)
20. *Epi. schomburgkii* (syn. *Epi. macrocarpum*)
21. ***Epidendrum secundum* (172 offs., 9 Awds.)**
22. *Epidendrum splendens* (0 offs., 0 Awds.)
23. *Epidendrum sterrophyllum* (0 offs., 0 Awds.)
24. *Epidendrum thermophilum* (0 offs., 0 Awds.)
25. *Epi. tricarinatum* (0 offs., 0 Awds., no photo)
26. *Epi. vinosum* (0 offs., 0 Awds., no photo)
27. *Epidendrum wrightii* (2 offs., 2 Awds.)
28. *Epidendrum xanthinum* (11 offs., 1 Awds.)
29. *Epidendrum xytriophorum* (0 offs., 0 Awds.)



Epi. Jubilee

(Epi. melanoporphyreum x Epi. capricornu)

- Register 1999, J & L Orchids
- No progeny
- 2 AOS Awards (1 AM, 1 HCC)



'J & L' AM/AOS
Mar 2008, NS 2.1 x 3.5 cm
131 flowers, 1 inflor.



Epi. melanoporphyreum



Epi. capricornu

Epi. Yellow Capri

(Epi. pseudepidendrum x Epi. capricornu)



'Cricket' AM/AOS

Oct 2008, NS 3.6 x 3.3 cm

216 flowers, 21 buds, 10 inflor.

- Register 1996, K. Arai
- 1 F1 progeny
- 3 AOS Awards (1 AM, 2 HCCs)



Epi. pseudepidendrum



Epi. capricornu

Epi. Butterpatty

(Epi. pseudepidendrum x Epi. paniculatum)

- Register 1970, Thomdel Coll.
- 3 F1 progeny
- 3 AOS Awards (1 AM, 2 HCCs)



'T. C.' AM/AOS

Mar 2016, NS 5.5 x 6.2 cm

37 flowers & 28 buds, 3 branched infl.



Epi. pseudepidendrum



Epi. paniculatum

Epi. Plastic Doll

(*Epi. pseudepidendrum* x *Epi. ilense*)

- Register 1989, T. Matsuda
- 3 F1 progeny
- 2 AM/AOS Awards



'Li' AM/AOS
Oct 1989, NS 3.9 x 4.3 cm
19 flowers, 6 buds, 6 inflor.



Epi. pseudepidendrum



Epi. ilense

Epi. Susquehanna

(Epi. pseudepidendrum x Epi. pseudowallisii)

- Register 1969, W. W. Wilson
- No progeny
- 3 AOS Awards (1 AM, 2 HCCs)



'Bronwyn Arp' AM/AOS
Apr 1990, NS 5.0 cm
27 flowers, 8 buds, 2 inflor.



Epi. pseudepidendrum



Epi. pseudowallisii

Epi. Costa Rica

(Epi. schumannianum x Epi. pseudowallisii)

- Register 1968, W. W. G. Moir
- 13 F1 and 14 total progeny
- 2 AOS Awards (1 AM, 1 CCM)



(photo NOT of awarded clone)

'J & L' AM/AOS

Feb 1969, NS 3.0 cm

36 flowers, 1 inflor.



Epi. schumanniana



Epi. pseudowallisii

Epi. Saranac Lake

(Epi. chlorops x Epi. cnemidophorum)

- Register 2009, Woodstream
- No progeny
- 1 HCC/AOS Award



'Douglaston Reserve' HCC/AOS
Feb 2012, NS 3.4 x 3.2 cm
47 flowers, 44 buds, 6 inflor.



Epi. chlorops



Epi. cnemidophorum

Epi. Beppy Gouda (Epi. Casuka) (Epi. cnemidophorum x Epi. cristatum)

- Register 1978, C. Withner
2015, M. Asuka (Epi. pfavii x Epi. raniferum)
- No progeny
- 2 HCC/AOS Awards + 1 CCM/AOS



'Elegance' HCC/AOS
Jul 2012, NS 4.4 x 4.3 cm
12 flowers, 7 buds, 2 inflor.



Epi. cnemidophorum



Epi. cristatum

Epi. Annelie Wans

(Epi. ilense x Epi. stamfordianum)

- Register 1992, H. Vissers
- No progeny
- 7 AOS Awards (3 AMs, 4 HCCs)



'Westfield' AM/AOS
Apr 2002, NS 4.0 x 5.6 cm
5 flowers on one inflorescence



Epi. ilense



Epi. stamfordianum

Epi. Islander's Delight

(Epi. veroscriptum x Epi. ilense)

- Register 2013, J. Izquierdo
- No progeny
- 1 AM/AOS Award



“Norma’s Joy” AM/AOS
Mar 2013, NS 2.6 x 3.1 cm
17 flowers, 22 buds, 1 inflor.



Epi. veroscriptum



Epi. ilense

Epi. Little Miss Sunshine

(Epi. xanthinum x Epi. magnoliae)

- Register 2009, Woodstream
- No progeny
- 1 AM/AOS Award



'Maureen Wood' AM/AOS
Mar 2012, NS 2.3 x 2.1 cm
59 flowers, 11 buds, 3 inflor.



Epi. xanthinum



Epi. magnoliae