ASA Newsletter

ASA
AROID SOCIETY OF AUSTRALIA INC

DECEMBER 2020

INSIDE THIS ISSUE:

A gorgeous Anthurium cupulispathum from Michael Pascall's collection

Annual General Meeting Postponed

We were really looking forward to the AGM that was meant to be held in August. It was going to be a much needed opportunity to catch up and share some plants.

Unfortunately, we couldn't guarantee safe social distancing in the usual venue, and we didn't want to risk our members, so it, and all 2020 General Meetings were cancelled.

Thankfully, we are not the only society to be affected in this way, and the Office of Fair Trading has given all societies a 6 month extension in which to hold an AGM. This means we will be plan to hold the AGM in in place of the 11th February 2021 meeting, circumstances permitting.

Looking to Join the Committee?

With the AGM approaching, all positions within the committee will become vacant. This means that, if you have been looking for a way to be involved, now is your chance!

In particular, we are looking for anyone interested in becoming Secretary, Treasurer, or Membership Officer. If you have any questions about what these positions entail, please contact secretary@aroids.net.

Call for Contributions

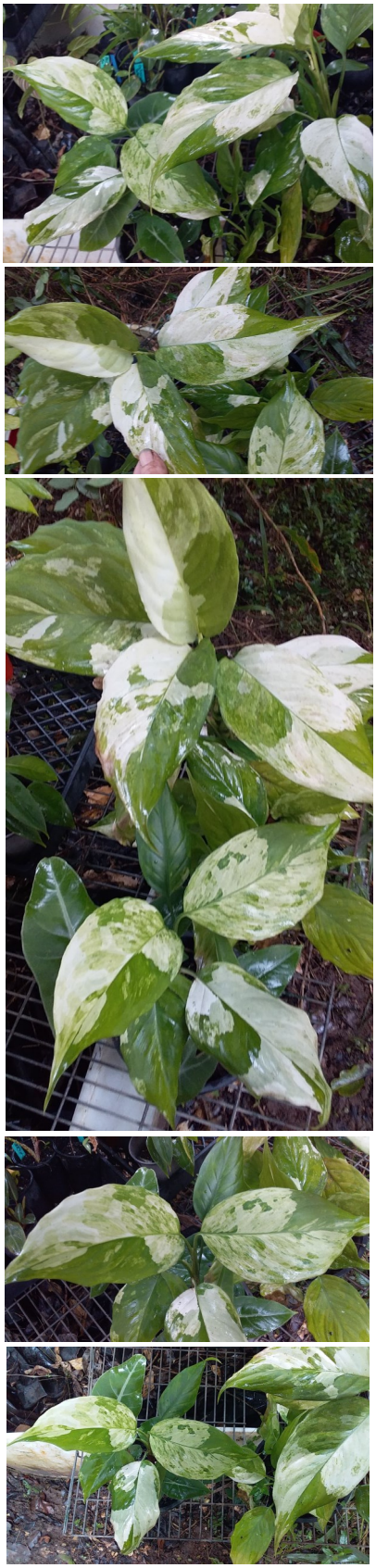
The ASA committee love aroids, and some of us have been growing them for many years. This being said, none (or not many!) of us are experts.

So if you're bored with nothing to do because of social distancing, we would love you to contribute your knowledge and experience to the newsletter.

We know that some of you are seasoned growers, and maybe you have discovered a fun fact, a growing technique, a tool, or a practice surrounding aroids that no one else knows. We would love if you would share these with us!

Similarly, many of our members are new to aroids, or gardening in general, and would greatly appreciate some general insight to help them get started.

Either way, we would love to share your knowledge. If you would like to contribute, or if you have a question or problem that you would like us to write about, please get in contact with our Editor,
Aaron, or email:
secretary@aroids.net



Some variegated Aglaonema modestums from Michael Pascall's collection.

ASA News

THANKS FOR UNDERSTANDING

We want to thank all our members for being so supportive and understanding during this difficult time.

ALL MEMBERSHIPS WILL ROLL OVER

As mentioned in the previous newsletter, all current memberships will be rolled over to next year. This means that if you are a financial member for 2019-2020 (which you likely are because you are reading this newsletter), then your current membership will expire at the end of June 2021. If you have already paid for the approaching year, then your membership will expire in 2022. It's not much, but hopefully it will lighten the strain on members who are having a hard time at the moment.

ASA MERCHANDISE

We love being involved in the ASA, and we hope that you do too! So we've made a whole array of ASA merchandise so that you can show off to your friends. More details will come as we make these available.

CONGRATS TO THE CHRISTMAS ONLINE RAFFLE WINNERS!

Wow, what an exciting raffle! Here are the winners:

1st Prize - Jessica Huie

2nd Prize - Gian Salamanque

3rd Prize - Ali Flew

4th Prize - Liz Sanders

5th Prize - Liz Sanders

Congratulations to all the winners!!! And enjoy your new plants. Thanks to all members that bought tickets.

MORE TO COME!

In terms of events, the ASA is currently operating on a play it safe basis. We don't want to risk any of our members, especially when our meetings attract interstate travellers.

This being said, with the slow re-opening occurring across the country, we are looking forward to returning to in-person events, trips, and plant sales. Hopefully it won't be long now. Stay tuned for emails and updates from the committee.

Lastly, if you have any ideas for an ASA event, or you would like to welcome us into your home to show off your plants, please let us know at events@aroids.net.

A stunning Philodendron glorious observed from a safe social distance.

ASA Events

WA Meeting

Unlike the rest of us, Western Australia had mostly returned to normal during Spring, and so they held a chapter meeting on Sunday 29th November.

If you're a WA member and you missed out on this, please contact the WA state Rep, Iain McGregor, or email events@aroids.net.

Thanks to Gonny Holdorp for the photos.

ASA Events

SA Meeting

South Australia also saw relaxed restrictions this spring, and they held a meeting at Neil Crafter's house.

There was a great turnout with 16 members in attendance.

At 1pm, there was a bumper plant sale with some $2000 of plants sold.

A BBQ lunch was held at 2pm, followed by a door prize and raffle, with plants generously donated by Jo Howski and Neil.

Attendees were then treated to a 3pm tour of Neil's impressive greenhouses (very jealous). The whole affair wrapped up at a civilised time of 6:30pm.

If you're a member in SA and you missed out, be sure to reach out to Neil or to the ASA to be informed about the next meeting.

ASA Events

SA Christmas Lunch

South Australian members were also lucky enough to be treated to a small Christmas lunch to celebrate the end of the year.

Thanks again to Neil for the photos, and thanks in particular to Alice MacDonald for providing the venue and preparing the food.

Upcoming AGM

As mentioned on the front page, we plan to run our AGM in February. This is a significant meeting because, during the meeting, the committee is disbanded and all positions become vacant. Following this, the committee for the proceeding year takes over.

Soon, we will send out nomination forms. Considering that we are an Australia-wide society, we would like to do our best to represent the whole of Australia. As such, we welcome nominations from all states, although Secretary must be able to travel to Brisbane.

Should a vote be required, we will run an online election prior to the AGM so that all members may contribute.

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Aroid News

As always, we love sharing news about aroids.
Got a hot tip or a special scoop? Let us know!

"I Was Held Against my Will" Says Beetle

Plants continue to surprise and bewilder with their methods for transferring pollen, even trapping beetles for days on end, not for digestion, but to give them a few coats of pollen before sending them out again.

As was covered in the July 2019 Aroid News, most aroids are pollinated by flies, beetles, and other arthropods (with some pollinated by birds). But Hay, Boyce and Wong document the most intricate flowering behaviour of any bisexual-floreted aroid: the *Lasia* genus, Lasia concinna and the better known L. spinosa.

Lasia spinosa is the prickliest of all aroids, and its cousin Lasia concinna is no exception (see image right). L. concinna has a troubled past, discovered in Java, Indonesia in the mid-19th century, then lost, before being rediscovered in West Kalimantan, in 1996. It creates very long stolons in diverse marshy areas from rice patties (below), to palm oil plantations, even growing in urban drainage ditches. In shade, it can reach up to 4m in height.

Above: The prickly petioles of Lasia concinna.
Below: Bloom of Lasia concinna with part of the spathe tube removed to show the small spadix entirely in the tube cavity (and young leaf blade, behind). Caption and images A. Hay.

What is really fascinating about *Lasia* is the way that it flowers. Unlike other bisexual-flowering aroids, the spathe is separated into two distinct sections, a hollow limb on top, and a lower cavity containing the spadix, separated by a small constriction (image below).

Below: Lasia cocinna growing next to a rice field.
All photos Alistair Hay.

Aroid News

Lasia Takes Hostages cont.

Notwithstanding trapping mechanisms seen in some rapid-flowering Monsteroideae (Díaz Jiménez et al., 2019), *Lasia* presents one of the most intricate, potentially nefarious processes. The authors summarise, "The strategy seems to be that of attracting, detaining and accumulating visitors in the spathe tube via the tight gap in the limb over a few days."

The process appears to be as follows. The entry to the spathe in the upper purple section is narrow and constricted. The authors note a faint fruity aroma emanating from the gap, which would attract beetles to crawl inside. The inside of the spathe is covered in downward pointing papillate cells, spikey protrusions from the spathe surface that stop the beetles from backing out, in the same way that one way access road spikes stop drivers going out the wrong way in parking garages.

Once the beetles have journeyed down the tube, they are released into the lower cavity containing the spadix, trapped there by the one-way entrance. Once inside, they are showered with pollen.

The authors came across a L. concinna a couple of days into female anthesis, and after cutting open a small window in the lower half "out poured a seething mass of very small hydrophilid beetles of the genus Cycreon". After another 2 days, the spathe tube completely opened up (image middle right), revealing the depleted spadix, and presumably freeing the prisoners.

Hay, A., Boyce, P.C. and Wong SY 2020. A New Encounter with Lasia concinna Alderw. (Araceae—Lasioideae), and its Beetle-trapping Blooms. *The International Aroid Society Newsletter*, 42(3): 7-9.

Clockwise from top:
Narrowly hourglass-shaped spathe of Lasia concinna at female anthesis.
Same as previous page.
The still closed spathe tube of Lasia concinna at the end of female anthesis with a window cut into it and some escaped Cycreon (Hydrophilidae) beetles.
Detail of the fully open spathe limb of Lasia concinna showing the thick margins with a narrow gap between them and the cream-colored interior.
The same bloom as in bottom right, two days later and immediately after male anthesis with the spathe tube gaping wide.

Quite the Hed(ache)eraceum!

Arguably a staple of every indoor plant collection is Philodendron hederaceum. These vines are voracious growers, reaching many metres of length in a short time. Even longer than the vines themselves is the list of names given to it, sometimes referred to as Philodendron scandens, Philodendron micans, Philodendron cordatum, and many others.

To sort out the taxological mess, Thomas Croat, in 1997, revised this Philodendron species (and many others) into Philodendron hedearaceum, with three subspecies: Philodendron hederaceum var. hederaceum, P. hederaceum var. oxycardium, and P. hederaceum var. kirkbridei.

Croat's monster 1997 article spans almost 400 pages, covering 103 taxa (95 species and 8 subspecies). It is titled 'A revision of Philodendron subgenus Philodendron (Araceae) for Mexico and Central America'.

Before we get to the article, a little about P. hederaceum. Most would be familiar with P. hederaceum on sight, distinguishable by its scandent habit, long internodes, deciduous cataphylls, ovate-cordate and long-petiolate leaves, and, if you're lucky enough to catch it in bloom, its solitary inflorescence, with green spathes, and reddish to purplish tube within.

Philodendron hederaceum's natural range is expansive, from Mexico and the West Indies in the North, down through Central America and much of South America, as far south as Peru and Bolivia, at elevations from sea level to 1500m. This would explain why it is such a reliable indoor houseplant, clearly happy across diverse temperatures and humidity.

Philodendron hederaceum var. hederaceum. Image credit Steve Lucas. Exotic Rainforest

So, why so many names? P. hederaceum was first published as Arum hederaceum, by Dutch botanist Nikolaus Joseph von Jacquin in 1760. Jacquin was working off a botanical plate engraved 4 years earlier by Charles Plumier. In 1763, 3 years later, Jacquin published his own plate of A. hederaceum, but it actually depicted the plant now known as P. jacquinii.

The mistake caused considerable confusion, with many botanists including

A Hed(ache)eraceum cont.

Kunth (1841), Engler (1899), Krause (1913), Dugand (1945), and others misapplying P. hederaceum to P. jacquinii.

This mistake was temporarily fixed by Heinrich Wilhelm Schott who, in 1829, changed Arum hederaceum to Philodendron hederaceum, and, in 1856, described P. jacquinii in reference to Jacquin's 1763 plate. Unfortunately though, at the same time, Schott classified the then independent species, P. scandens, P. prieurianum, P. oxycardium, P. cuspidatum, and P. micans as synonymous with P. hederaceum, essentially saying they were all the same plant.

Engler, in 1899, and then Krause in 1913, undid this, separating P. hederaceum again into distinct species, namely P. prieurianum, P. scandens, P. oxycardium, and P. micans. Confusion ensued for the next half century, with these species united, then separated again many times over, with Standley and Steyermark throwing P. cordatum into the synonym mix in 1958.

In 1963, Bunting undid all the good taxological work of the previous century by erroneously stating that the first image of P. hederaceum was by Jacquin in 1763 (remember that the 1763 plate is actually P. jacquinii), overlooking the actual first depiction of P. hederaceum by Plumier in 1760. All hell breaks loose here, as not only is P. hederaceum now accepted to be the same plant as P. jacquinii again, but Bunting also claims it to be synonymous with P. scandens.

Philodendron hederaceum var. oxycardium from the author's own collection. Approximately 1m tall.

As a sidebar, P. scandens is a bit of a red herring. It was a very obscure, not widely used name for a plant described by Koch in 1853. But its existence is a little dubious because there is no original specimen of the species, there is no data about from where it was collected , nor are there even any illustrations of it. So no one knows what it really is, and most horticultural works following Birdsey in 1951 simply considered it the same as P. oxycardium.

So, to recap, as of 1963, P. hederaceum is now the same plant as P. jacquinii, P. prieurianum, P. oxycardium, P. scandens P. cordatum, and P. micans. What a mess.

A Hed(ache)eraceum cont.

Mature Philodendron hederaceum with inflorescence. Image credit Thomas Croat.

Cleaning this up took a bit of sleuthing. Firstly, it had to be shown that P. hederaceum and P. jacquinii are separate. To do this, it was shown that two plates, Plumier's 1956 original of P. hederaceum and Jacquin's 1760 of (the now) P. jacquinii were clearly different plants.

Next, Plumier's original description says that it was found growing in Martinique, an island in the West Indies. Whereas P. jacquinii, while quite widespread, does not occur in the West Indies. Lastly, the word hederaceum suggests it grows like Ivy (from Hedera, the genus in which we find Ivy), whereas P. jacquinii is thick and cumbersome. Evidently not the same plant.

Croat's 1997 article sorts the whole mess out, splitting P. hederaceum into three subspecies: Philodendron hederaceum var. hederaceum, P. hederaceum var. oxycardium, and P. hederaceum var. kirkbridei. The previously separate species P. cuspidatum, P. micans, P. midhui, P. scandens (and 5 others) all become P. hederaceum var. hederaceum.

The separate P. oxycardium now becomes P. hederaceum var. oxycardium. Croat also describes a recent find from Costa Rico as the third subspecies, P. hederaceum var. kirkbridei, after Joseph Kirkbride, a former Missouri Botanical Garden graduate student who first discovered it.

Both P. hederaceum var. hederaceum and P. hederaceum var. oxycardium are widely found in homes in Australia, and are only told apart by their juvenile leaf blades. In P. hederaceum var. hederaceum, the juvenile blades are velvety with a silky sheen on the upper surface, whereas the juvenile blades of P. hederaceum var. oxycardium are glossy on the upper surface.

Interestingly, naturalist Joep Moonen has observed Philodendron hederaceum leaves up to 45cm in length in French Guiana.

Croat, T. 1997. A revision of Philodendron subgenus Philodendron (Araceae) for Mexico and Central America. Revisión del subgénero Philodendron de Philodendron (Araceae) para México y Centroamérica. *Annals of the Missouri Botanical Garden*, *84*(3): 311-704.

Anyone interested in reading the full article (and other articles) can head to the Biodiversity Heritage Library's free online archive of the *Annals of the Missouri Botanical Garden*.

A Hed(ache)eraceum cont.

Image and caption from:
Mantovani, A., Brito, C. and Mantuano, D., 2018. Does the same morphology mean the same physiology? Morphophysiological adjustments of Philodendron hederaceum (Jacq.) Schott, an isomorphic aroid, to ground-canopy transition. Theoretical and Experimental Plant Physiology, 30(2), pp.89-101.

Habit of the isomorphic aroid vine Philodendron hederaceum (Jacq.) Schott.
A.
Terrestrial individual ascending along the host.
B.
Lower canopy individual (1.5 m in height) is indicated (arrow).
C.
Higher canopy (3.0 m in height) individual of P. hederaceaum appears at left. Note that leaf size does not increase along the vertical ascension (thin arrows). For comparison, an individual of the allomorphic aroid vine Epipremnum aureum is also shown. Note the leaf area increase along the vertical ascension (wide arrows).
D.
Size and morphological comparison of P. hederaceum leaves collected at ground, lower canopy (1.5 m in height) and higher canopy (3.0 m in height) from the left to right, respectively.
E.
Several anchor roots and one feeder root of P. hederaceum are shown (scale bar = 9 cm)

Who is the ASA?

It is a lot of work to keep the ASA running, and it is helmed by a dedicated and hard-working committee and numerous invaluable volunteers.

Management Committee

President	Michael Pascall
Vice President	Lee Thorneycroft
Secretary	Steven Best
Treasurer	Jordan Ives
Membership Officer	Mim Stocks
Events Coordinator	Meddii Blackburn
Editor & Web/Tech Support	Aaron Grinter
General Committee Member	Neil Crafter
	Jim Edwards

Interstate Representatives

NSW	Tammy Huynh
VIC	Karissa Baddeley
SA	Neil Crafter
North QLD	Michael Pascall
WA	Iain McGregor
TAS	Looking for volunteers!

Volunteers

Marketing	Sarah Boyle
Membership Assistant	Kris Arkins
Popular Vote	Bec Kos
Audio-visual Assistant	Jace Cowan
Auctioneer	Trevor Crawford
Raffle Tickets	Doug Spring
Plant Sales	Margaret Kraa
Refreshments	Leanne Bennett
	Kira Teasdale

One of the gorgeous climbers seen on this year's Qld bus trip.

Special Thanks

The ASA would like to say a special thanks to others who volunteer their time and recourses.

We thank Mark Almond, Steven Flood, David Burnett, Robyn Ganly, Greg Oldano, Peter Boyce, and Trevor Crawford for their kind contributions and ongoing donations to our online raffle and auctions.

Thanks also to Bruce Dunstan for his incredible online presentation.

Calendar of ASA Meetings

Annual General Meeting (2019-2020)	**11th February 2021**
April General Meeting	**8 April 2021**
Annual General Meeting (2020-2021)	**12 August 2021**
October General Meeting	**7 October 2021**

Thanks for reading, we wish all our members a Merry Christmas.

Yours sincerely

The Aroid Society of Australia Inc.

Committee

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The unique prophyll of a Philodendron tortum in Michael Pascall's collection