



ASA Newsletter

AUGUST 2020

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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 would rather not risk our members, considering many of them are in the high risk group.

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 on the usual 6 month window in which to hold an AGM. Ideally, we won't have to wait that long, and will hold it towards the end of the year (circumstances permitting).

Looking to Join the Committee?

If you were waiting for the AGM to put your hand up for a committee position, let us know!

Just because the AGM has been delayed, it doesn't mean that you can't still lend a hand and learn more about how to run the society.

Introduce yourself to one of the committee members, or email 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 modestum* from Michael Pascall's collection.



A stunning
Philodendron
glorious ob-
served from
a safe social
distance.



ASA News

AGM IS POSTPONED

As you saw on the previous page, the AGM will be postponed until it is safe to meet in large groups again. We will keep you updated on when we plan to hold this.

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.

ASA Events

CONGRATS TO THE ONLINE RAFFLE WINNERS!

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

First Prize - Tesha Tsai
Second Prize - Leanne Bennett
Third Prize - Jess Huie
Fourth Prize - Rick Harvest

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

WESTERN AUSTRALIA MEETING

Unlike the rest of us, Western Australia has mostly returned to normal, and so they are holding a chapter meeting on Sunday 20th September at 1pm.

The meeting will be held at Sharmane Rudge's house. RSVP directly to Sharmane, Iain McGregor, or events@aroids.net to get the address and for further details.

MORE TO COME!

With the suspension of in-person events, we are going to try to do more to involve our members online. We are not sure what format this will take, but we look forward to getting everyone involved.

“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.



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 concinna* growing next to a rice field.
All photos Alistair Hay.



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.

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!

Aroid Old News

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.

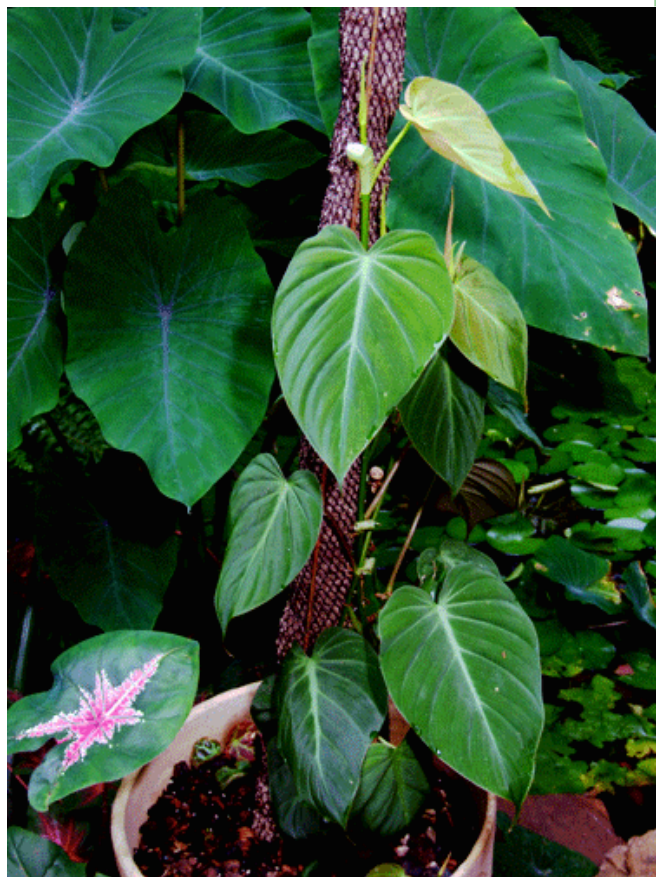
To sort out the taxological mess, Thomas Croat, in 1997, revised this *Philodendron* species (and many others) into *Philodendron hederaceum*, with three subspecies: *Philodendron hederaceum* var. *hederaceum*, *P. hederaceum* var. *oxycardium*, and *P. hederaceum* var. *kirkbridei*.

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. jacquini*.

This mistake was temporarily fixed by Heinrich Wilhelm Schott who, in 1829, changed *Arum hederaceum* to *Philodendron hederaceum*, and, in 1856, described *P. jacquini* 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. jacquini*), 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. jacquini* again, but Bunting also claims it to be synonymous with *P. scandens*.



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. jacquini*, *P. prieurianum*, *P. oxycardium*, *P. scandens*, *P. cordatum*, and *P. micans*. What a mess.

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 Rica 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*.



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. hederaceum* 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
 Vice President
 Secretary
 Treasurer
 Membership Officer
 Events Coordinator
 Editor & Web/Tech Support
 General Committee Member

Michael Pascall
 Lee Thorneycroft
 Steven Best
 Jordan Ives
 Mim Stocks
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 Jim Edwards

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Tammy Huynh
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 Audio-visual Assistant
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 Raffle Tickets
 Plant Sales
 Refreshments

Sarah Boyle
 Kris Arkins
 Bec Kos
 Jace Cowan
 Trevor Crawford
 Doug Spring
 Margaret Kraa
 Leanne Bennett
 Kira Teasdale

One of the gorgeous
 climbers seen on the
 recent Qld bus trip.



Special Thanks

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

We thank 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. We would also like to thank Chris Hall and Arden Dearden for assisting the ASA with hard to find plants.

Thanks also to Bruce Dunstan for his incredible online presentation.

Calendar of ASA Meetings

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Annual General Meeting (Postposed)	12th August 2020
General Meeting (Uncertain)	7th October 2020
Western Australia Meeting	20th September 2020

Thanks for reading and we wish our members all the best during these uncertain times.

Yours sincerely

**The Aroid Society of Australia Inc.
Committee**



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

