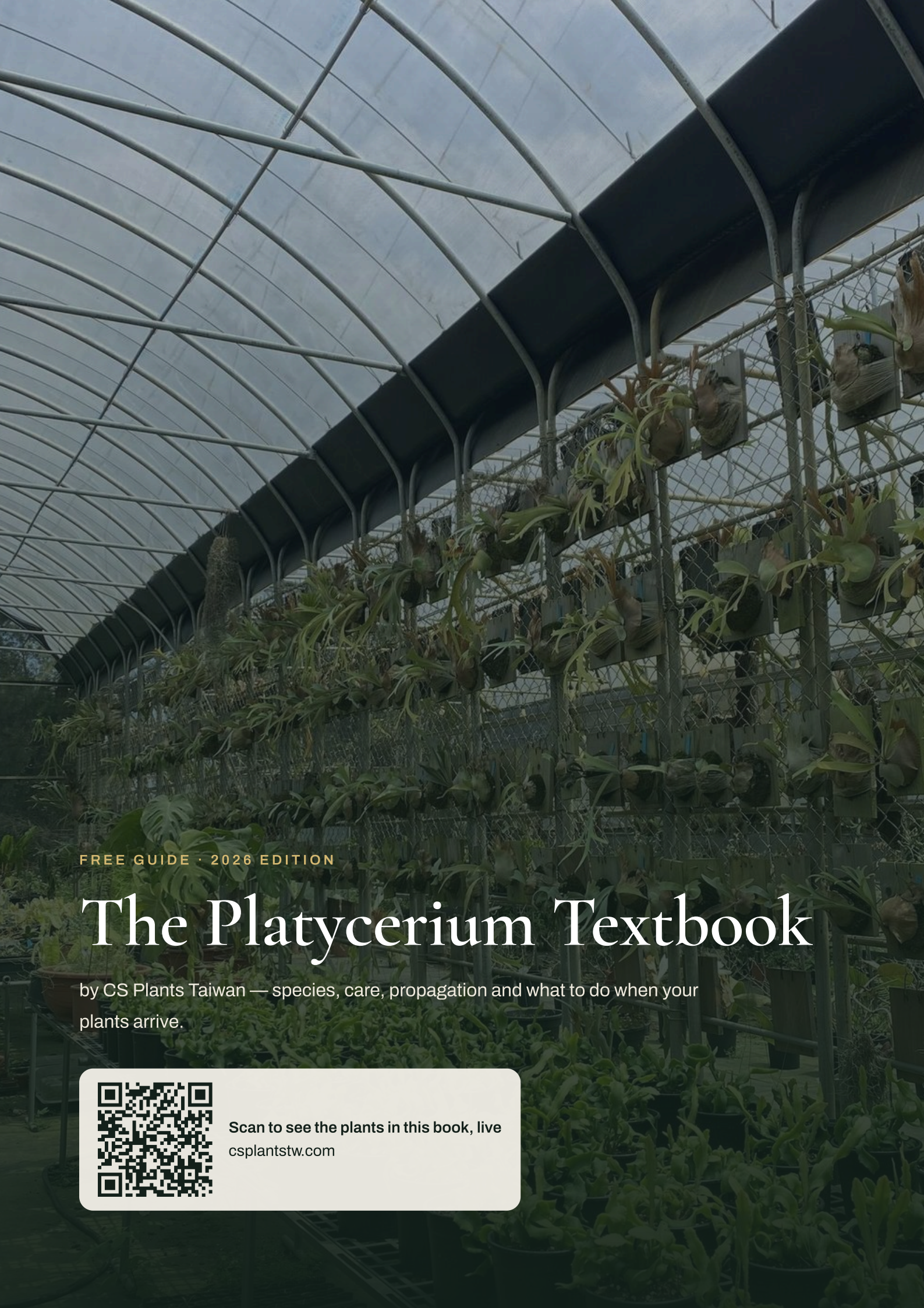


FREE GUIDE · 2026 EDITION

# The Platycerium Textbook

by CS Plants Taiwan — species, care, propagation and what to do when your plants arrive.

**Scan to see the plants in this book, live**
csplantstw.com

FROM THE GROWER

We wrote this textbook in 2024, when CS Plants began. Since then we have walked through hundreds of greenhouses across Taiwan, Thailand and Japan, worked alongside growers and breeders in 8 countries, and shipped plants to collectors, shops and nurseries in more than a dozen countries — from the USA and Canada to Germany, France, Poland, Israel, Singapore, Malaysia, Indonesia, Vietnam, India and Sri Lanka.

This 2026 edition brings what we learned in those greenhouses back into the basics.

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**2024**
FIRST EDITION

**12+**
COUNTRIES SHIPPED

**30+**
GROWERS & PARTNERS

**100+**
GREENHOUSES VISITED

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Steven at a plant show




Partner greenhouse, Taiwan




Sporelings under grow lights




Packed for export, phyto-certified

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# 1. To Know the Platycerium

Platycerium (Staghorn Fern) is a genus in the Polypodiaceae family. Currently, there are three major groups and 18 species (indigenous species). It is mainly distributed in tropical and subtropical areas and an epiphyte that grows on trees and rocks.

The Platycerium has two types of leaves with different functions. One is the basal fronds (also called a shield-shaped leaf or humus-collecting leaf), which covers the roots and has a branched leaf crown that grows upward or is covered in a spherical layer. The other type, the sporophylls, are drooping and forked, or branching upward, resembling elk antlers, which is why the plant is named staghorn fern.

## Parts of the Platycerium

**Basal fronds (Nutrient leaf)**

Round leaves located at the bottom and closer to the medium. They are mainly used to protect the root system, store water, and catch falling organic matter.

**Sporophyll**

The larger and more eye-catching leaf of the Platycerium. In addition to photosynthesis, the sporangium on the back of the leaf is a main method of reproduction for the staghorn fern.

**Bud**

The central part of the plant around which all leaves and roots grow. It is also used to determine the plant's vitality and growth direction.

**Root system**

The roots that anchor the plant and absorb nutrients and water.

**Pups**

When the plants are healthy and stable, the roots will extend out of the growing medium and develop into individual plants.

**Spore**

The reproductive unit of ferns, closer to a seed than an egg: a spore grows into a tiny prothallus, which then produces the new plant.




Parts of the Platycerium

💡 Two things to leave alone: the old brown shield fronds (they protect the roots and hold water, so never peel them off), and the fine white hairs on the fronds (they cut water loss, so do not wipe them).

## 2. The Varieties

Platycerium has 18 species as below, each with a special shape and character. Staghorn ferns are classified into three major groups by morphology and evolutionary relationship, which broadly match their native regions (see the note below for the exception): Java-Australia, Africa-America, and Malay Peninsula-Asia.

### Java-Australia

- *Platycerium bifurcatum*
- *Platycerium hillii*
- *Platycerium veitchii*
- *Platycerium willinckii*

### Africa-America

- *Platycerium alcicorne*
- *Platycerium andinum*
- *Platycerium elephantotis*
- *Platycerium ellisii*
- *Platycerium madagascariense*
- *Platycerium quadridichotomum*
- *Platycerium stemaria*

### Malay Peninsula-Asia

- *Platycerium coronarium*
- *Platycerium grande*
- *Platycerium holttumii*
- *Platycerium ridleyi*
- *Platycerium superbum*
- *Platycerium wallichii*
- *Platycerium wandae*

💡 The groups follow evolutionary relationships, not where each species grows, so P. superbum, which is native to Australia, belongs to the Malay Peninsula-Asia group.

# The 18 species



### *P. alcicorne 'Africa'*

Platycerium alcicorne is the African staghorn fern, with stiff, upright and repeatedly forked fertile fronds above rounded shield fronds. This is the mainland African form, which collectors grow alongside the Madagascar form.

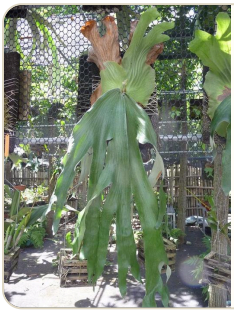
csplantstw.com/?q=Africa



### *P. alcicorne 'Madagascar'*

Platycerium alcicorne is the African staghorn fern, with stiff, upright and repeatedly forked fertile fronds above rounded shield fronds. This is the Madagascar form, which collectors grow alongside the mainland African form.

csplantstw.com/?q=Madagascar



### *P. andinum*

Platycerium andinum, the American staghorn fern, is the only Platycerium native to the Americas. Its long, narrow fertile fronds hang down well over a metre on mature plants, covered in pale felt.

csplantstw.com/?q=andinum



### *P. bifurcatum*

Platycerium bifurcatum is the classic staghorn fern and the easiest to grow. Its forked, arching fertile fronds and quick production of pups make it the usual first staghorn for new growers — and the parent of many hybrids.

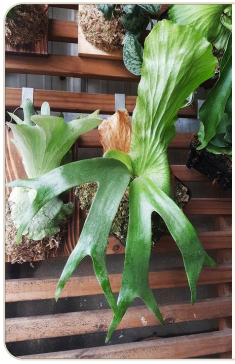
csplantstw.com/?q=bifurcatum



### *P. coronarium*

Platycerium coronarium has tall, crown-like shield fronds and very long, pendant fertile fronds. Its spores form on special rounded lobes near the base of the fertile fronds.

csplantstw.com/?q=coronarium



### *P. stemaria*

Platycerium stemaria, the triangle staghorn, comes from tropical West and Central Africa. Its broad, wedge-shaped fertile fronds fork near the tips, where the spore patches form.

csplantstw.com/?q=stemaria



### *P. ellisii*

Platycerium ellisii from Madagascar is one of the smaller species, with broad, glossy, bright-green fertile fronds that fork only once or twice.

csplantstw.com/?q=ellisii



### *P. grande*

Platycerium grande from the Philippines is a giant staghorn with tall, deeply lobed shield fronds and broad, pendant fertile fronds. It carries two spore patches on each fertile frond, which separates it from the similar P. superbum.

csplantstw.com/?q=grande



### *P. hillii*

Platycerium hillii from northern Queensland has upright, dark-green and broad fertile fronds with shallow forks. It is easy to grow and a parent of several popular hybrids.

csplantstw.com/?q=hillii



### *P. holttumii*

Platycerium holttumii from mainland Southeast Asia is a large species with tall shield fronds and pendant fertile fronds split into two unequal lobes, with the spores on the shorter lobe.

csplantstw.com/?q=holttumii



### *P. madagascariense*

Platycerium madagascariense is a small species prized for its shield fronds, which are raised into a network of ridges like a honeycomb. It needs steady humidity and is one for experienced growers.

csplantstw.com/?q=madagascariense



### *P. quadridichotomum*

Platycerium quadridichotomum from western Madagascar is a small species adapted to a long dry season: its fertile fronds curl up and the plant rests during drought, then unfurls again with water.



### *P. ridleyi*

Platycerium ridleyi is one of the most sought-after staghorn ferns. Its shield fronds are deeply ribbed and wrinkled and hug the mount tightly, while the upright fertile fronds carry their spores on small spoon-shaped lobes.

csplantstw.com/?q=ridleyi



### *P. elephantotis*

Platycerium elephantotis, the elephant-ear staghorn, has broad, undivided fertile fronds that hang like large ears — instantly recognisable and very different from the forked fronds of most species.

csplantstw.com/?q=elephantotis



### *P. veitchii*

Platycerium veitchii is one of the most popular staghorn ferns. Its narrow, upright fertile fronds fork clearly at the tips and are covered in silvery hairs. It is easy to grow and produces pups readily.

csplantstw.com/?q=veitchii



### *P. superbum*

Platycerium superbum from eastern Australia is a giant staghorn with tall, lobed shield fronds and broad, pendant fertile fronds. It carries one spore patch on each fertile frond, which separates it from the similar P. grande.

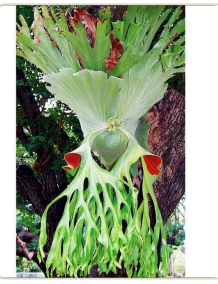
csplantstw.com/?q=superbum



### *P. wallichii*

Platycerium wallichii, the Indian staghorn, grows from Myanmar and Thailand into northeast India and Yunnan. Its broad, lobed fertile fronds carry large spore patches, and it rests through the cool dry season.

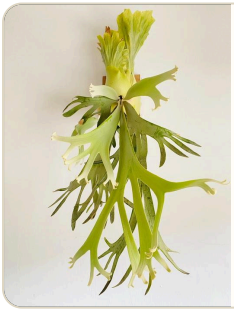
csplantstw.com/?q=wallichii



### *P. wandae*

Platycerium wandae from New Guinea is the largest staghorn fern and can grow over 2 metres across. Its shield fronds have a frilly, crested front edge, a feature no other species has.

csplantstw.com/?q=wandae



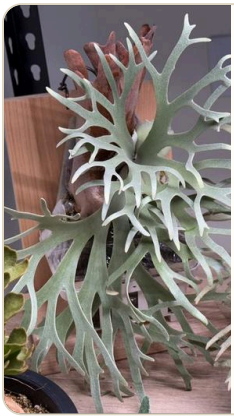
### *P. willinckii*

Platycerium willinckii from Indonesia has slender, densely felted fertile fronds that droop up to a metre long, like a small green waterfall. It is the parent of many famous hybrids and dwarf forms, including the dwarfs 'Bacteria' and 'Jade Girl'.

csplantstw.com/?q=willinckii

# Hybrids & cultivars

Platycerium has hundreds of hybrids and cultivars. Below are the ones collectors ask us about most, with mother-plant photos. Each one links to the live plants in our catalogue.



### *P. 'Bacteria'*

Dwarf · P. willinckii

Platycerium 'Bacteria' is a dwarf mutation of P. willinckii and one of the six classic willinckii dwarfs; it was once called the smallest staghorn fern in the world. Its fertile fronds are short, broad and many-forked, with short fingers and a deeper green than most dwarfs. Its tiny size makes it happiest in a controlled indoor setup under grow lights.

csplantstw.com/?q=Bacteria

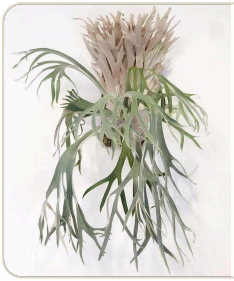


### *P. 'Jade Girl'*

Dwarf · P. willinckii

Platycerium 'Jade Girl' is a dwarf mutation of P. willinckii from Indonesia and one of the six classic willinckii dwarfs. Its short, broad, many-forked fertile fronds end in long, slender fingers with a heavy silvery coating, and it is often said to be the easiest of the six to grow.

csplantstw.com/?q=Jade%20Girl



### *P. 'North Monkey'*

Platycerium 'North Monkey', also sold as 'Monkey North', is a hybrid of P. willinckii and P. veitchii.

csplantstw.com/?q=North%20Monkey



### *P. ridleyi 'Silver Dwarf'*

Dwarf · P. ridleyi

Platycerium ridleyi 'Silver Dwarf' is a dwarf form of P. ridleyi, with the deeply ribbed shield fronds of the species on a smaller, silvery plant.

csplantstw.com/?q=Silver%20Dwarf



### *P. 'Foong SiQi'*

Platycerium 'Foong SiQi' is a hybrid raised in Malaysia by the grower S.S. Foong and named after his daughter. When mature, its fertile frond tips curl, which has earned it the nickname 'curly staghorn'. Its offspring vary widely, and several well-known forms — including 'Ginka' — were selected from its spores.

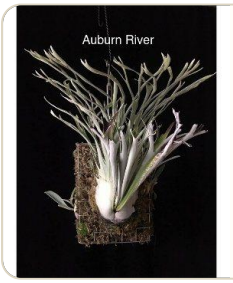
csplantstw.com/?q=Foong%20SiQi



### *P. 'White Gizmo'*

Platycerium 'White Gizmo' is a named staghorn fern cultivar grown by collectors.

csplantstw.com/?q=White%20Gizmo




### *P. veitchii 'Auburn River'*

Platycerium veitchii 'Auburn River' is a selected form of P. veitchii, with the upright, silvery fertile fronds of the species.

csplantstw.com/?q=Auburn%20River



### *P. 'Rydeen'*

Platycerium 'Rydeen' is described by growers as a cross between 'Mount Lewis' (a form of P. willinckii) and P. veitchii 'High Finger', combining drooping fronds from one parent with upright frond tips from the other.

csplantstw.com/?q=Rydeen



### *P. veitchii 'Pedro Tatsuta'*

Platycerium veitchii 'Pedro Tatsuta' (also sold as 'Pedro') was raised in 1997 by the Brazilian grower Pedro Russo and spread worldwide by Carlos Tatsuta. Its shield and fertile fronds are very white, the fertile fronds thrust upward, and the tall, forked shield fronds show clear dark veins. It is on the delicate side: give it a cool, airy spot in summer and even light so the shield fronds grow symmetrically — it does well indoors.

csplantstw.com/?q=Pedro%20Tatsuta



### *P. 'Ginka'*

Platycerium 'Ginka' is a spore-grown selection of 'Foong SiQi' made by Thailand's I Love Ferns nursery. Its thick fronds carry conspicuous white star-shaped hairs, and the broad, wavy fertile fronds end in many short forks.

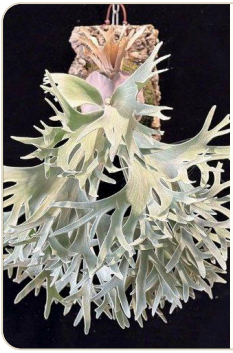
csplantstw.com/?q=Ginka



### *P. bifurcatum sp. White*

Platycerium bifurcatum sp. White is a pale form of P. bifurcatum, named for its whitish fronds, with the easy-going nature of the species.

csplantstw.com/?q=bifurcatum



### *P. veitchii 'Celso Tatsuta'*

Platycerium veitchii 'Celso Tatsuta' (also sold as 'Celso') was raised in 2002 by the Brazilian grower Celso and spread worldwide by Carlos Tatsuta. Its broad, short, many-forked fertile fronds are covered in bright silver hairs with pale veins. It is easy to grow and a favourite parent for new hybrids.

csplantstw.com/?q=Celso%20Tatsuta



### *P. 'OMG'*

Dwarf

Platycerium 'OMG' is a dwarf mutation of P. willinckii from Indonesia and one of the six classic willinckii dwarfs, with short, broad, many-forked fertile fronds. It is regarded as one of the more demanding dwarfs to grow well.

csplantstw.com/?q=OMG



### *P. 'Jenny'*

Dwarf

Platycerium 'Jenny' is a dwarf P. willinckii bred in Thailand by the grower Mr. Yot and named after his daughter, and one of the six classic willinckii dwarfs. Its fertile fronds divide in fine, layered forks and curl at the tips like small claws. It grows slowly and keeps its compact dwarf form best in a cool room under grow lights; spore-grown Jenny seedlings often revert to normal size.

csplantstw.com/?q=Jenny

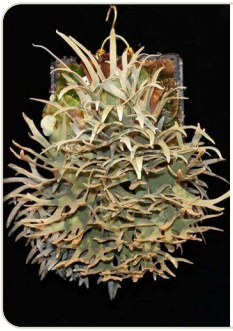


### *P. 'Golden Boy'*

Dwarf

Platycerium 'Golden Boy' is a dwarf mutation of P. willinckii found in Indonesia and one of the six classic willinckii dwarfs. Its short, broad, many-forked fertile fronds have long, slender tips and a distinctly yellowish tone.

csplantstw.com/?q=Golden%20Boy



### *P. 'Nano'*

Dwarf

Platycerium 'Nano' is a dwarf mutation of P. willinckii from Indonesia and one of the six classic willinckii dwarfs, with short, broad, many-forked fertile fronds on a compact plant.

csplantstw.com/?q=Nano



### *P. 'Yellow Moon'*

Platycerium 'Yellow Moon' is a P. willinckii cultivar from Thailand's I Love Ferns nursery and the best known of its 'Moon' series. It has long, pale, finely forked fertile fronds with a yellowish tint, and it throws many forms from spores — including dwarf Yellow Moon and 'Totoro'.

csplantstw.com/?q=Yellow%20Moon



### *P. ridleyi 'Pakarang'*

Platycerium ridleyi 'Pakarang' is a named selection of P. ridleyi, with the ribbed shield fronds and upright fertile fronds of the species.

csplantstw.com/?q=Pakarang




## *P. ridleyi 'Saman'*

Platycerium ridleyi 'Saman' is a named selection of P. ridleyi, with the ribbed shield fronds and upright fertile fronds of the species.

csplantstw.com/?q=Saman



## *P. ridleyi 'Monkey King'*

**also sold as Wide Frond**

Round form

Platycerium ridleyi 'Monkey King', also sold as 'Wide Frond', is a round-form selection of P. ridleyi with the deeply ribbed shield fronds of the species. Its fertile fronds have broader, more rounded lobes than the species.

csplantstw.com/?q=Monkey%20King



## *P. willinckii 'Banna A'*

Platycerium willinckii 'Banna A' is a named selection of P. willinckii, with the long, felted, drooping fertile fronds of the species.

csplantstw.com/?q=Banna%20A




## *P. willinckii 'Moonlight'*

Platycerium willinckii 'Moonlight' is a named selection of P. willinckii, with the long, felted, drooping fertile fronds of the species.

csplantstw.com/?q=Moonlight




## *P. 'Tiara'*

Platycerium 'Tiara' is a P. willinckii selection raised from spores of 'Little Crown' in Thailand and named in Taiwan for its fertile frond tips, which curl upward like the jewels of a tiara. It stays dwarf-sized, with broad, many-forked fertile fronds.

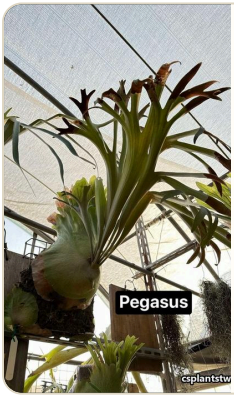
csplantstw.com/?q=Tiara




## *P. 'Elsa'*

Platycerium 'Elsa' is a named staghorn fern cultivar grown by collectors.

csplantstw.com/?q=Elsa




## *P. 'Pegasus'*

Platycerium 'Pegasus' is a hybrid with broad, deeply lobed fertile fronds that spread like wings, which gives it its name.

csplantstw.com/?q=Pegasus




## *P. willinckii 'Pearl Queen'*

Platycerium willinckii 'Pearl Queen' is a named selection of P. willinckii, with the long, felted, drooping fertile fronds of the species.

csplantstw.com/?q=Pearl%20Queen

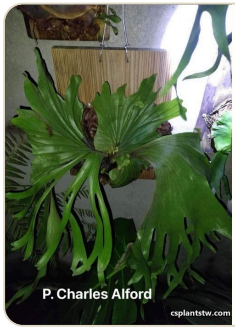


## *P. Yellow Moon Dwarf 'Totoro'*

Dwarf

Platycerium Yellow Moon Dwarf 'Totoro' is a dwarf selection from the dwarf form of 'Yellow Moon' (P. willinckii), named in Taiwan. It has short, broad, many-forked fertile fronds and grows well indoors under lights or outdoors in light shade.

csplantstw.com/?q=Totoro




## *P. 'Charles Alford'*

Platycerium 'Charles Alford' is a named staghorn fern cultivar grown by collectors.

csplantstw.com/?q=Charles%20Alford

Please feel free to ask on Instagram: @cs_plants_tw

# 3. Growing Conditions

The staghorn fern, like other ferns, likes a humid and warm environment. It can grow healthily as long as it is planted indoors or outdoors. However, most staghorn ferns require more sunlight than other ferns — they need a bright light environment.



Light: shade netting over the greenhouse



Air: circulation fans keep the air moving

Although the staghorn fern can adapt to environments, you still need to pay attention to whether the planting environment is too cold. If you grow the staghorn fern outdoors, it is still recommended to move it to a warmer room when a cold snap hits, and especially when it snows.

## Water the plants

Staghorn ferns tolerate drought far better than excess water, and their roots need air. Overwatering and poor drainage are the most common cause of rot, so never water in a hurry.

Water when the moss surface is dry and the whole plant feels light when you lift it, before the fronds turn soft.

Soak the whole mount or pot until the medium is fully wet, or irrigate heavily for 20–30 minutes to simulate rain. As a guide: about once a week for mounted plants in a warm greenhouse in summer; every 2–3 weeks indoors and in winter.

Water the medium, not the fronds. Water trapped between shield fronds causes rot. Water in the morning so the plant dries before night.

> 💡 For reference only — adjust to your own environment. Ask us on Instagram: @cs_plants_tw.

## Light

Staghorn fern likes diffused sunlight. Shade 50%-70% in summer and autumn, and 30% in spring and winter. Keep the luminosity at 5,000-20,000 lux, which avoids leaf burns caused by direct sun exposure and is most suitable for the growth of staghorn fern.

## Temperature

Staghorn ferns grow best between 15 and 30 °C. To be safe, keep them above 10 °C. Some species cope with short cool spells, while tropical species such as P. ridleyi and P. coronarium prefer to stay warm all year. In a cold snap, bring plants indoors or into a heated space.

## Humidity and air movement

Aim for 50–80% humidity with gentle, constant air movement. Humidity only helps when the air keeps moving: still, saturated air around a wet medium leads to rot and algae. Keep near-100% humidity for recovery boxes only (see section 7).

# 3.1 Cultivation Methods

Common cultivation methods include pot cultivation, hanging basket cultivation, or board (mount) cultivation, using mediums such as sphagnum moss or shredded bark. Plastic pots are commonly used for pot cultivation, while weathered hardwood or bark can be used for board cultivation.



Pot culture



Board (mount) culture

When cultivating on a board, choose a board that drains and breathes freely and clean it first; then a substrate of sphagnum moss or shredded bark is applied, and the plant is bound to the board with the substrate, simulating its natural habitat of epiphytic growth on trees.

Tie the plant down over the old brown shield fronds, never across green ones, which bruise easily. Use fishing line, plastic mesh or nylon, but never copper wire: copper is toxic to ferns. When the shield fronds reach the edge of the board, move the plant to a bigger one.

Staghorn ferns need little fertiliser. Either place a few slow-release pellets under the plant when mounting, or give a weak liquid feed while it is actively growing — not both. If you water with RO or rain water, choose a fertiliser that contains calcium and magnesium. Do not feed plants that are recovering or sitting below 15 °C.

Never use soil: it holds too much water and kills the roots. We do not recommend ball mounts either: they are hard to soak through, and once soaked they stay too wet for the roots to breathe.

# 4. Reproduction

Staghorn ferns are divided into a pup-forming type and a monopodial type. The pup-forming type develops pups from roots extending outside the nutritive leaves, or from lateral branches of the rhizome; once these pups grow steadily, they can be separated from the parent plant and grown independently. Monopodial-type staghorn ferns, on the other hand, cannot form lateral buds and rely solely on spores for sexual reproduction. Species originating from Java-Australia and Africa-America belong to the pup-forming type, while those from the Malay Peninsula-Asia are monopodial and can only reproduce through spores.



Sporelings under grow lights




Young sporelings in cell trays



Ready to pot on

## Dividing a pup

Wait until the pup's own shield frond is about 5–7 cm across. With a clean, sharp blade, cut around the edge of its shield frond and lift it out together with its roots and some of the medium, so the new plant has roots, shield and fertile fronds. Mount or pot it, keep it in bright shade with high humidity (a nursing box works well, see section 7), and water lightly until new fronds appear and the roots grip the medium.

## Sowing spores, step by step

**1. Check the spores**

Spores form in brown patches (sori) on the underside of fertile fronds. Harvest only when the patches have turned dark brown; pale or greenish patches are not ripe yet.

**2. Scrape**

Gently scrape the ripe patches onto clean, dry paper.

**3. Check under magnification**

Look at the scrapings under a microscope or loupe. Plump, well-filled spores germinate best; pale, shrivelled or bleached spores rarely do — in our partner's tests, fewer than 1 in 10. You can also see how much debris is mixed in.

**4. Sieve**

Sieve twice, first through a 100-mesh screen and then a 200-mesh one, pressing gently so the sporangia break open and the spores pass through. This leaves the sporangia, star-shaped hairs and frond debris behind, which would otherwise bring mould.

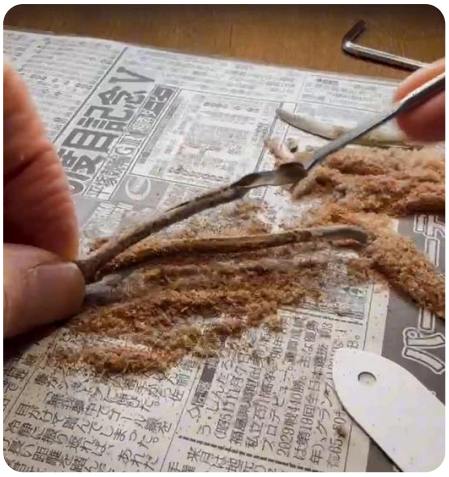
**5. Sow**

Dust the spores thinly over moist peat in a closed container — no need to sterilise it. Keep it humid, at around 28 °C, under an ordinary plant grow light.

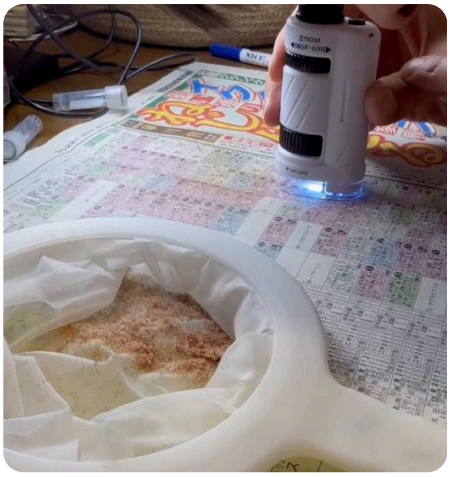
💡 Patience pays. In P. bifurcatum, spores germinate within about 1–4 weeks, tiny heart-shaped prothalli form over the next 1–2 months, and the first true fronds appear after roughly 6–10 months. Pot them on once they are large enough to handle, and expect another 1–2 years before a sporeling becomes a sellable plant.



1. Ripe spores: the brown patches under the tips of a fertile frond



2. Scraping ripe spores onto paper



3. Checking under a microscope



Sporangia and star-shaped hairs, magnified



4. Pressing through the sieve



Clean spores after sieving



5. Dusting spores onto moist peat

*Spore-sowing method and step photos courtesy of our partner, plant specialist **WOW forest** · **植播電台 (Instagram)***

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# 5. Growing Platycerium Indoors

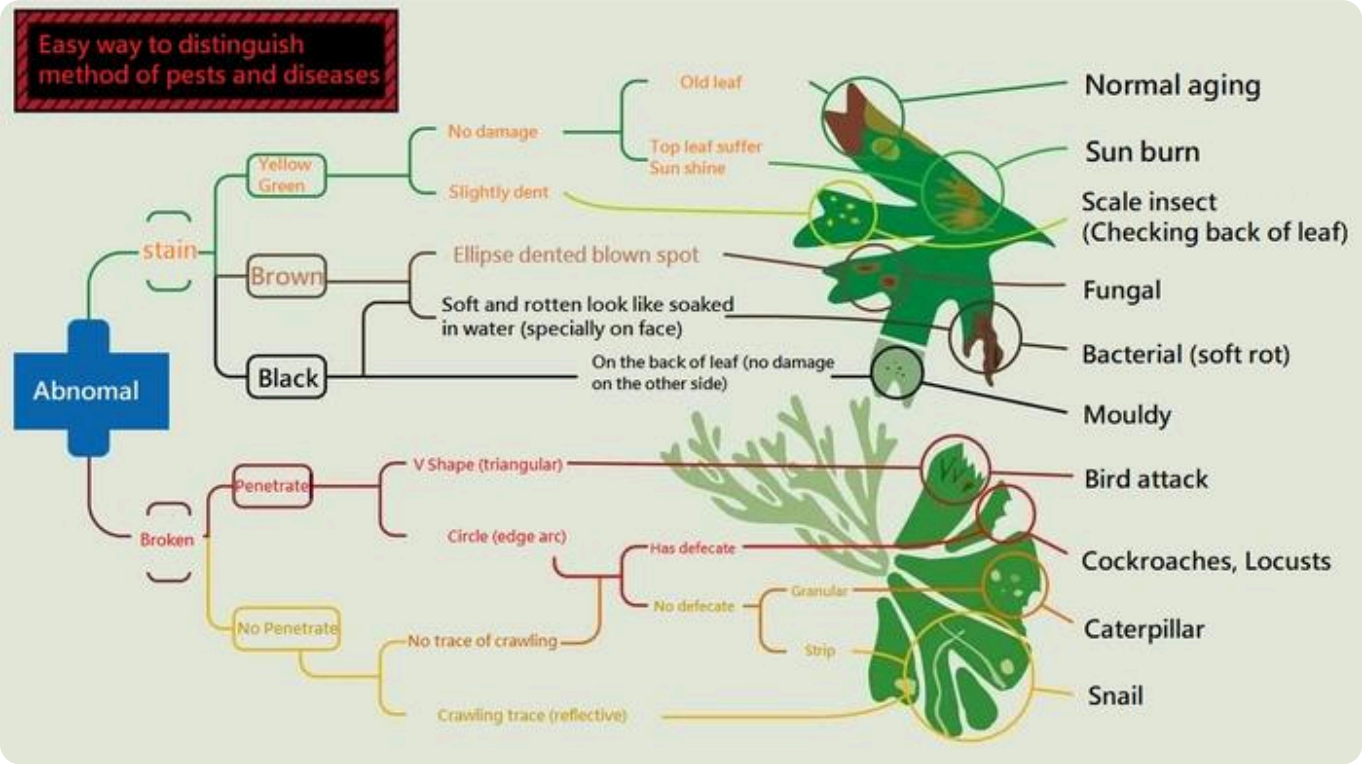
Staghorn ferns do well indoors: no soil needed, and fewer pests than most houseplants, though they still need regular checks (see section 6). Give them bright, indirect light, or grow lights for 16–20 hours a day. Keep a small fan running for air movement. Targets: 15–30 °C, 50–80% humidity, 5,000–20,000 lux. For a setup plan, message us and we'll help.






Mounted plants under LED grow lights indoors

# 6. Easy Way to Distinguish Pests & Diseases



# 7. After Your Plants Arrive

Plants that travel need a few weeks to settle. Judge them by the bud, not by the old fronds.




Unpacking a delivery




Delicate plants keep their humidity in clear boxes

**1. Check the central bud first**

Firm and plump means the plant is healthy, even if older fronds were marked in transit.

**2. Water once, then keep it cool**

Water the medium once, then keep the plant out of direct sun and heat.

**3. Wait before mounting**

Leave it in its pot for two weeks before mounting.

**4. Nurse the delicate ones**

Put dwarfs, P. ridleyi and any weak plant in a clear, closed container (a nursing box) in bright, indirect light. Water only when it feels light, about every 3–5 days.

**5. Keep new plants apart**

Keep new plants apart from your collection and check for pests before mixing them in.

**6. Trim later, not now**

Damaged fronds do not recover. Leave them to shelter the bud until new fronds open, then trim them.

Most plants settle within a few weeks. Give them that time before judging them, or before reselling them.

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# Plants grown, sourced and shipped by CS Plants

Rare Platycerium, ferns and foliage from Taiwan, Thailand and Japan, shipped worldwide with phytosanitary certificates. Wholesale, shops and sourcing enquiries welcome.

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