08/04/23 BSA meeting topic – Dyckia.

Wikipedia - *Dyckia* is a genus of plants in the family *Bromeliaceae*, subfamily *Pitcairnioideae*. The genus is named after the Prussian botanist, botanical artist and horticulturist The Prince and Earl of Salm Reifferscheid-Dyck. The plants were introduced in Europe during the early 19th century, and this was a way to honour his achievements.

Gardenista.com

Looking and playing the part of succulents, *Dyckias* are actually a genus of the bromeliad family. Their love of sun, drought tolerance, and unique appearance often make people think they are succulents. But unlike true succulents, *Dyckia* doesn't store its own water in its leaves.

With varieties that have numerous beautiful shapes, sizes, color, *Dyckias* combine well with succulents and other low-water plants, making a dramatic addition to xeriscapes and desert landscapes. With 120 different species and many more cultivar, it's easy to choose at least one to add to the landscape, even if only for a conversation piece.

Most dyckias are native to the rocky terrain of Brazil with a few hailing from South American countries such as Bolivia, Paraguay, and Uruguay.

Some dyckias are even saxicolous (translation: they live attached to rocks), though most grow in the ground.

A notable characteristic of *Dyckia* is its ability to shrug off temperatures dipping into the upper teens {Farenheight} (unlike other bromeliads which burn and shrivel when frost hits). *Dyckias* also don't beg for moist, humid conditions as many bromeliads do. On the same note, many bromeliads have tiny root systems that act as anchors and not a primary nutrient source; *Dyckias* boast extensive root systems and need ample containers to accommodate the growth.

Dyckias typically have long, thin leaves and most have notably sharp spines around the leaf edges. (**Tip:** Wear thick garden gloves when planting or trimming, or you may get an accidental acupuncture treatment.) But these plants fortunately are tough and require little maintenance or interference.

World of Succulents. How to Grow and Care for Dyckia

Dyckia is a genus of plants in the family Bromeliaceae. There are 120 different species with many more cultivars. Most species are native to Brazil, but a few originate from other South American countries such as Uruguay, Paraguay, and Bolivia. The genus was introduced into Europe during the nineteenth century. The generic name honors Prince von Salm-Dyck, an early expert on succulents. *Dyckia*s are not technically succulents, as they do not store water in their leaves like true succulents. Instead, they are xerographic and survive long periods without water by going dormant. Their rosette of thick succulent leaves will eventually wilt, but recovery is rapid when watering is resumed.

The leaves vary from long and strappy to short and scalloped. All foliage is fairly rigid and may be smooth or serrated, solid color, variegated or spotted. Long stalks with multiple red, yellow, or orange flowers appear in spring. The wide range of varieties ensures that there is a specimen for every taste.

Growing Conditions

Most species survive in warm regions with heavy rainfall for half the year and arid conditions the rest of the time. This makes Dyckia care slightly challenging, as getting the right balance of moisture to keep the plant happy may be difficult. The growing conditions in Dyckia's natural setting should be mimicked as much as possible.

It is not uncommon in their native region to find some forms growing on rocks near the water. Water and the cycle of the monsoon season are important features to Dyckia health. They are used to rather poor soil when they grow in the ground and should be planted in a good succulent mixture.

Dyckias need full sun and temperatures of up to 90 °F (32 °C) to thrive. Beware of exposing the plants to freezing temperatures for more than a brief time as they are not cold hardy. Temperatures below 40 °F (4 °C) seem to be the limit of Dyckia growing conditions.

Dyckias are exposed to harsh sun and arid conditions for most of the year. Then the rainy season appears, and the plants are half-drowned. But, contrary to common sense, they seem to love this treatment, and plants are healthiest when the monsoon season is harsh and long.

General Care

While actively growing, Dyckias need regular water to produce happy plants. The soil should not be soggy but evenly moist at all times. Use a saucer under potted plants to keep the roots from sitting in water but allow for evaporation and consistent humidity. In winter, when growth is dormant, you may reduce the amount of water by half.

Fertilize from spring to fall with a half-strength liquid plant food. In the wild, the plants form pups or offsets, which result in new plants. The same is true in container-grown plants, and these can be divided away from the parent with ease.

The plants set seeds readily when flowers are present, and they germinate quickly. However, they also freely hybridize, and the species resulting from the seeds may not represent the parent.

Source: gardeningknowhow.com

Links. Back to genus Dyckia. Succupedia: Browse succulents by Scientific Name, Common Name, Genus, Family, USDA Hardiness Zone, Origin, or cacti by Genus

Illawarra 2002 02 April NEWSLINK p9

Dyckia: Named after the cactus researcher Prince Salm-Dyck this genus contains about 80 terrestrial xerophytic species. From Victoria Padilla's book, **Bromeliads,** comes the following information:

"Of the terrestrial bromeliads, Dyckias are probably the best known because their rugged nature makes them adaptable to most growing conditions. There are about 100 known species, many of which are so similar that they are difficult to distinguish; thus, the collector need have only several varieties in order to have a representative selection. The genus is mostly indigenous to central Brazil, with a few species found in Uruguay, Paraguay, northern Argentina, and Bolivia. They are found at altitudes of 700 to 4,000 feet. All grow in warm, sunny areas on or in the crevices of rocks. The small varieties form such large mats or mounds that it is almost impossible to make out the individual plant.

Dyckias range in size from miniatures about 4 inches in diameter to the giant *Dyckia maritima,* which towers well above the average man. All have stiff, spineedged, succulent leaves arranged in a rosette. Most species have green leaves, the undersides of which are covered with minute, silvery scales arranged in regular rows. The flower petals range in color from sulfur yellow to bright orange and are borne on tall, slender stalks that appear laterally rather than from the center of the plant (the case with most other bromeliads).
Dyckias are spring bloomers. Dyckias are robust plants and do well when grown with other succulents. They need light and good drainage; they do not want to be pampered and will withstand some drought and neglect. They make interesting subjects for the tropical or subtropical garden as well as charming container specimens."

Brom.Soc.Qld. - Bromeliaceae Vol IX #8 1975 'Plant of the month' p8
Dyckias are a deep-rooted genus, being terrestrial plants that live in the open sunny areas where the ground is rough with large stones and rocks, so when grown under artificial conditions they need plenty of root room, warm fresh air, and plenty of sun morning and evening. Given these conditions they are easy growers, they all have flowerson erect stems with rosettes of stiff spine edged leaves with a succulent and strong appearance. Some of these plants are large but most of the ones seen in horticulture are only 3 to 8 inches in diameter. They all have small flowers ranging in colour from pale yellow to bright orange on stalks that grow from the side of the plant. Most other Bromeliads grow their flowers on a stalk from the centre of the plant.

Brom.Soc.Qld. - Bromeliaceae-Vol-XXXII-3-1999 p8
Dyckia Cultivars by Geoff Lawn
By and large *Dyckias* have had a chequered history with Bromeliad growers. Of the 122 species, plus 8 varieties currently recognised (Luther/Sieff Binomials List 1998) perhaps 30 species have limited popularity in cultivation, possibly more so in succulent collections and botanical gardens. These 'prickly beasts' in a mixed *Dyckia* collection do hybridise very readily because the many bright tubular flowers are attractive to pollinators. Honeyeaters are often seen swinging on the inflorescences. While Benzig (The Biology of Bromeliads 1980 page 156) suggests *Hechtia* may be wind pollinated, it is possible that in such a small area as a garden or botanical garden bed the number of hybrids arising may well be due to wind! *Dyckias* are also prolific seed producers, the larger species' inflorescences of up to 100-200 flowers each setting 20-30 seeds per capsule. How many are viable is another story. Are *Dyckias* self-fertile?
There are, surprisingly, only 26 named cultivars (including hybrids) listed in the BSA's Bromeliad Cultivar Registry 1998. Unnamed and undocumented cultivars seem to be grown more widely and some of these may be unidentified species (but unlikely if grown from seed). Probably many of these unknown forms originated as hybrid seed through the BSI and BSA seed banks or imported seed from botanic gardens. For instance, over the years Bromeletter's Seed List has offered such types as *D. frigida* x *fosteriana*, 'Large Red', *brevifolia* hybrid, 'green tall golden spike', Dark Chocolate', 'Lad Cutlak F2', 'species (red leaves)', '*fosteriana* hybrid', as well as reputedly selfed species. Depending on the species and hybrid parents, such progeny may show considerable variation even in one seedling batch. Only from offsets can you assume authenticity. Of course identifying such clones can be frustrating as a number of species look similar and keying out a hybrid is impossible. Such problems are not new, as Bernard Stoner exemplified in writing about a '*Dyckia fosteriana* hybrid' (so named) in Bromeletter Jan/Feb 1968 page 15-16 and again in the May/April 1980 issue page 11-12. Bernard concluded that this plant was possibly a *D. encholirioides* hybrid, a view shared by Derek Butcher who recently studied a flowering specimen from me of the same vegetative cultivar originally from Bernard.
Ruby Ryde in Sydney used a *D. fosteriana* hybrid, 'Wine leaf' (so called) as the parent in her hybrid *D*. 'Keith Ryde'. She confirms by photographs that my clone looked remarkably similar to hers, both of which have been cultivated in Australia for at least three decades. Derek Butcher in Adelaide grows *D*. 'Big Red', originally from a cactus grower, and his clone is close to mine apart from the former's strongly branched inflorescence. Better documented is *D*. 'Dark Chocolate' which Olwen Ferris distributed during her 'nursery' days on the Gold Coast (Qld). Olwen states that *D*. 'Dark Chocolate' was one of six different *Dyckia* offsets bought in 1950 from Wal Charley's Jungle Bromeliadum Nursery at Mt. Tomah near Bilpin, NSW. Olwen had nick named the cultivar 'Dark Chocolate', presumably because either she did not know it's true identity or because it was possibly Wal Charley's own hybrid (see Journal of the Bromeliad Society 1980 page 19). It is known that Wal Charley did hybridise bromeliads but there were no records kept. I have yet to compare my clone with *D*. 'Dark Chocolate' but all four of these vintage cultivars may be linked. Is there any Aussie grower who knows the answer?
To help avoid such confusion I am naming my particular clone as *Dyckia* 'Port Wine', possibly a hybrid of *D*. *encholirioides*. A description is as follows;
Flowering Clump to 150cm tall; growth habit dense mound, rosettes 30-40 leaved each to 50cm diameter, no stolons; leaves incurving, seasonal greenish maroon to port wine colour in full sun.
Leaves fleshy by rigid, sheaths orbicular 4cm long, 6cm wide, mainly white, entire; blades to 20 cm long, spinose-serrulate, triangular, 25 mm wide at sheath, upper surface almost glabrous, wine red; beneath grey-green, strongly lepidote with longitudinal lines of trichomes; spines white tipped, 3 mm long.
Scape to 100 cm long, 8 mm thick, bracts exceed the internodes and are narrowly triangular, reddish, spined, 30-50 mm long, glabrous on top lepidote underneath.
Inflorescence usually simple to 60 cm long but with occasional 1 or 2 basal branches to 15 cm long; rachis finely floccose, orange, 5-ridged, internodes from 15 mm long but lessening near apex.
Floral bracts narrow triangular, spined, straw-like, lower ones exceeding the flowers, upper ones just exceeding the sepals.
Flowers tubular with spreading petals, sessile.
Sepals 10 mm long, 7 mm wide, orange, finely floccose on inside, outside lepidote on tip only.
Petals amber-orange, 15 mm long, 3 mm wide at base, 6 mm wide at platte, free, finely floccose.
Gynoecium filament ribbon-like, free from petal, 8 mm long, pale yellow, anther 2 mm long twisted yellow; pollen yellow; pistil 7 mm long, yellow, ovary 4 mm long.
Dyckia `Port Wine', like most in this genus, is tough, adaptable, and a picture to see over Spring and Summer when up to 30 spikes emerge from a clump's leaf axils, not centrally as in most bromeliads.

The advantages of registration are world-wide publicity through the BSI Bromeliad Cultivar Registry, the Australian Cultivar Checklist plus photos on the Internet Website http://fcbs.org

Derek the Hybrid Detective - DD0312d Dyckia 'Rabbit Warren Group'. From BSA web site.

by Derek Butcher, March 2012

This saga started in the late 1950's when an attractive *Dyckia dawsonii* was being grown at Huntington gardens in California. Here all the *dyckias* are all grown together and we know that any seed collected here is almost certain to be a hybrid. We know that Adelaide Botanic Garden fell into this trap by assuming that seed sent from Huntington were true species until the time came to try to link flowering plants to their formal descriptions. Anyway, anecdotal evidence shows that both Dutch Vandervort and Bill Baker, both of California had offsets of *D. dawsonii*. We also know that the Zurich Bot Garden obtained an offset in the old days and arrangements are being made for an offset to go back to Huntington.

Now let us look at intentional hybridists because SOMEONE crossed *D. fosteriana* with another attractive *D. platyphylla* but did not bother to name their cross. It was identified by formula and it was not until 2003 that I found someone in Florida growing this plant where it was said that Ervin Wurthmann was the hybridist. We registered this as 'James Gray' and 'James Green' because there were two forms which is strange for an F1 hybrid but reasonable because we know that Foster himself got adulterated seed from his very own *D. fosteriana* and unwittingly distributed incorrectly identified seedlings. We know that Bill Baker sometime in the 1980's crossed *D. dawsonii* with (*fosteriana* x *platyphylla*) and called the seed batch 'Brittle Star'. We have a photo of 'Brittle Star' in the Bromeliad Cultivar Register that came from Chanin in Thailand who got his plant from Baker. However, from the parents quoted we know the seedling batch would have been varied. Bill Baker then crossed *D. marnier-lapostollei* with 'Brittle Star' to produce 'Warren' which again must have had varied progeny but nobody seems to be growing it the USA so we can get a photo of at least one of those called 'Warren'.

We now move to Australian shores where we read in the Far North Coast Bromeliad Study Group NSW newsletter March 2012:

"Ruby Ryde brought into Australia *Dyckia* 'Warren' from the USA and collected seed from it which she grew. Helen Clewett obtained some of the resultant seedlings as *Dyckia* 'Warren F2' (Sons of Warren) of which Helen collected and grew seed from in 2008/2009. Helen presented these seedlings to show the great variation in these hybrids. She also showed three dyckias which she had acquired from Genny Vauhkonen (Catlan) some 30 months ago. These were labelled *Dyckia* 'Paulsen's Puzzle' and the variation among these dyckias was also noted as one plant possessed white spines, another red spines, the third much narrower leaves than it's siblings.

Also mentioned was, with hybridization these dyckias have tended to stay small and clump well, making them popular as potted specimen plants. (see photo)"

Such are the problems we are facing with *Dyckia* plants which these days are more likely to be unidentified hybrids than species as well as the reluctance of growers of seed to cull. The answer seems to be in an unofficial grex approach. The name 'Paulsen's Puzzle' does suggest odd goings on and if we did adopt the name 'Rabbit Warren Group' it would suggest the plants are as fecund and promiscuous as rabbits.

Let us look at the problem as in Australia. To my mind Helen's seedlings are really an F5 (or is it F6?) generation (Grandsons of Warren) and yet this F5 notation suggests that foreign pollen has never been involved, but which is highly likely in *Dyckia*. Is Ruby Ryde still growing her original 'Warren'? Thanks to Ian Hook we now have a photo of 'Warren' when at its prime. You see, the problem is that although Helen kept the F2 on her labels many did not do so, so there are many false 'Warren' or Sons of Warren out there. AND THAT IS NOT ALL because we know that Bob Larnach was so impressed with Ruby's plant that he imported seed from Bill Baker of 'Warren' and we do not know how diligent Bill Baker was in getting 'pure' seed. Here again many of the resultant seedlings were grown as 'Warren', without the F2 indicator, in Australia. So if you are growing a plant called 'Warren' it should look like its photo. I'll bet that there are Warren's great grandchildren and unnamed nieces and nephews around too.

Far North Coast Bromeliad Study Group (FNCBSG) March 2017 p.12

Dyckia Cultivation Hints gleaned from the Bromeliad Society of Houston

Light: They like full sunlight. 5000 foot-candles, 50% shade, is probably the least amount of sun that they can have and still flourish.

Temperature: They prefer temperatures in the range of 40-90 degrees Fahrenheit, but they will withstand much lower and higher temperatures. Most species will not be harmed by freezing weather if they are planted in the ground and given minimal protection.

Fertilizer: Use a dilute fertilizer solution (¼ strength or less) with every watering spring through fall, but eliminate fertilizer during cold weather. When plants are actively growing in strong light, it is hard to over fertilize an established plant, but they don't appear to suffer if they are not fertilized, they just grow more slowly.

Water: Although they will tolerate drought, they thrive on frequent watering while actively growing, however keep plants on the dry side during cold weather or during periods of reduced light. In the summer time they tend to dry out rapidly; it is helpful to keep them in a shallow container of water.

Medium: Grow in a heavy mix that contains water retaining polymers and a large quantity of organic matter. A mix similar to what would be used for a *Cryptanthus* or a *Hectia* would be appropriate.

Containers: Dyckias probably do best when they are grown in the ground. Their ability to take temperatures in the 15-20 F degree range makes them one of the best Bromeliads to use for landscaping in the Houston area. They should be able to take all but our most severe winter weather with only minimal protection. If you do choose to grow them in pots, use one that will accommodate the plant's large root system. This is one plant that appreciates a pot that is about as wide as or wider than the plant itself. But WARNING: usually the larger the pot and the more the fertilizer the bigger the plant. Most *Dyckia* species have leaves armed with sharp spikes that make working with the plants painful. It is often difficult to separate pups from the mother plant. It is helpful to remove the plant from its pot and try to work on it from the bottom. You want to bring out the heavy equipment when dealing with your *Dyckia* collection. Leather gloves, a sturdy knife, a small saw, and, in extreme cases, a hatchet could all come in handy when it is time to separate and repot large clumps of plants. When you separate a

pup, try to preserve as much of its root system as you can. If it has no roots, treat its base with rooting hormone before potting. In either case pot the plant in a fairly small pot using a well drained mix, and leave it there until the plant has a chance to establish itself. Most pups are slow to root and start growing, but when the plants root system fills the pot, move the plant into a larger pot using a heavier mix.

Far North Coast Bromeliad Study Group (FNCBSG) July 2012 p.15

Dividing the Spinies by Ross Little

Dyckia, *Puya*, *Hectia*, *Encholirium* etc. all fall into this category of the terrestrial bromeliads with nasty spines. They all produce pups, however due to their tough spiny leaves these pups can be hazardous to get at and remove, they aren't fun to play with often inflicting some nasty wounds so gloves for some are a must.

These plants use several methods for reproduction: 1) Seed -- sexual reproduction by the flowers, this method is quite unreliable especially with *Dyckia*'s if one is wishing to reproduce species, as *Dyckia*'s are one of the most promiscuous of all the bromeliads. Therefore if one is wanting to grow species from seed you would need to isolate the plant / plants of same species for controlled pollination. True to type seed can't be assured if plants are left in the garden for the birds, ants or bees to pollinate.

2) Pups -- asexual reproduction; a vegetative offset which can be removed. Firstly remove the plant from it's pot and scrape away excess surface potting mix to reveal the base of any pups. Gently move pups from side to side to manually break them off, often a push to one side with the thumb is enough. You may need to remove several lower leaves to get to some pups. However it is better practice to use a good sharp, sturdy bladed knife or cutters. Always try to get as much root with each pup as possible by cutting as close to or part of the mother plant if required, the mother will recover. Pot pups with roots and treat as normal. Pups with no roots may need to be tied down to keep firm onto the mix to enable root growth, elastic bands or twist ties will do just nicely.

3) Self Division -- the plant divides or crowns, often this can be into 2, 3 or 4 sections as conjoined plants. Dividing these is a little more difficult and requires care, a lot of practice helps. Firstly continue to remove the lower leaves until all the sections are clearly visible, these will look similar to a clove of garlic only they are all attached to a central stem and root base. It is the lower part of this stem we need to cut to enable separation. With a sharp knife cut just under the division lines and part way through the stem, repeat at each division point cutting the stem down to the roots. In doing this each new plant should get a share of the root ball, re-pot and treat as normal. If you didn't get any roots and your plant now looks like an onion, set this new plant into some fresh potting mix, use an elastic band or twist tie over the plant and pot to hold the plant firmly in position until roots have established. (photo p.8)

As with any offset /pup removal practice on plants you have plenty to spare, take failures as a lesson learnt and try not to repeat. Try removing pups at different times of the year, with a little observation this will assist in understanding which season works best for which genera. We may grow these nasty's in full all day sun, though from experience we found a little light shade offers a better survival rate when getting pups started, then gradually introduce them to full all day sun. Don't forget to take notes as you go.

Far North Coast Bromeliad Study Group (FNCBSG) August 2012 p.3

Our guest for the day Sharon Song from Sydney, spoke about her love of growing and collecting *Dyckias*, those tough, spiney, terrestrial, multi-coloured things that are very popular and useful in landscaping. Most originate in Central and South America and can occur in impenetrable clumps. Because of the armoury on these plants, pups are often problematic to remove, and weeding can be difficult. Sharon mentioned that there were about 130 known species of Dyckias and a very large number of hybrids. She finds them easy to grow as they can handle most soil types and potting mixes. They can also tolerate a variety of growing conditions including mild frosts and full sun. They in fact prefer full sun. The flowers are mainly yellow to orange with a diversity of inflorescence sizes. She points out one interesting feature, the fact that *Dyckias* don't die after flowering. The flower spike comes from a lateral leaf axil rather than from the growing centre of the plant. *Dyckias* produce many pups. *Dyckias* are also very promiscuous and consequently purity of species is very difficult to maintain. They are very fast from seed to seedling (just a few months) and often germinate under the mother. Incidentally, seeds are easy to collect and can be grown in seed mix or scoria. In Sharon's experience those *Dyckias* grown hardest often develop into the best plants (isn't that the way with most broms?). With the seedlings Sharon uses a good quality potting mix, something like a cactus or succulent mix (not an orchid mix). On potting or planting she feeds with Dynamic Lifter and/or banana peel. She never feeds the plant again. Though the *Dyckias* enjoy water, they will survive for a long time without it. When too dry, the tips of the leaves will brown off. They also enjoy good drainage and should be placed in larger pots than for other broms. Sharon enjoys the variety of colours the plants produce e.g. purple, black, burgundy and green set off by a multiformity of spine sizes and colours. The only spineless hybrid she knows of, is *Dyckia* 'Naked Lady', a plant which is very slow to flower and does not appeal to her personally. She believes the *Dyckias* are best displayed using shallow terracotta pots. Her collection includes a number of Bill Baker hybrids which are dark colours with white spines. She also loves *Puyas* and *Hectias* and from the looks of it, any spiney plant. She also has many *Neoregelias* in pots. Her garden is fairly open with shade cloth in some sections. The garden does receive the occasional frost. One thing to note: We have it on good authority that Sharon's garden is a "stand-out". It is well established, well attended, and immaculate. If you are ever offered the opportunity to view her garden, do not hesitate to accept……. It is a corker!

Far North Coast Bromeliad Study Group (FNCBSG) August 2015 p.3

Dyckia joanae-marcioi and the Serra Geral by Doug Binns 2015

There are several mountain ranges in Brazil with the name of 'Serra Geral', but the one of interest to me during a recent trip was the one in the north of the state of Minas Gerais. This range has long been known to cactus enthusiasts for its several endemic or near-endemic cactus species. For me, its main attraction was that it was also home to at least two apparently endemic bromeliad species (*Dyckia joanae-marcioi* and *Orthophytum eddie-estevesii*). At the time they were described, each was known from only its respective type locality. Although the locality descriptions in each case were vague and the localities

may not have been in the Serra Geral, I thought this range was the most likely place for them to occur. In contrast to the cacti, which have been known since the 1970s, the bromeliads have been discovered and described only since 1999.
Any traveller along highway BR 122 between the towns of Monte Azul and Mato Verde can't miss the Serra Geral. It is a spectacular series of rocky peaks and domes east of the road and roughly parallel to it, extending north-south for over 30 klm. For anyone who likes to see bromeliads growing in nature, it simply cries out for exploration. Unfortunately, most of it is not such an easy place to explore. Despite the maze of farm tracks around the base and in the valleys, there are very few roads or tracks into the hills themselves and walking away from roads is often difficult due to rocky terrain and very dense shrubby vegetation.
In the protologue for *Dyckia joanae-marcioi*, the only locality information provided is that it occurs near the town of Mato Verde, at an elevation of approximately 900 mtrs, in a 'slightly rocky' place. My guess was that the locality would be to the east of Mato Verde, in the Serra Geral. Mato Verde is a town which is not well set up for foreign tourism, but it does offer several basic (and very cheap!) hotels and was my obvious starting point if I hoped to find *Dyckia joanae-marcioi*. Apart from an excellent bus service along the highway, other options for transport are a bit limited, but I found that if I hung around the bus station a taxi would eventually turn up. With my embarrassingly pathetic Portuguese, I managed to convince a taxi driver that, yes, I really did want him to take me along the road into the hills and leave me at the roadside. My intention was to spend the day slowly making my way back to town, checking likely habitats as I went. I probably just reinforced any impressions he had that foreigners were a bit weird.
Soon after being dropped off, I was very excited to find some small silvery rosettes of a Dyckia scattered over a steep rocky hill at a substantially higher elevation than the 900 mtrs given in the description. Was this *Dyckia joanae-marcioi* ?
The plants looked similar to what had been described and illustrated, except they were generally at or slightly below the low end of the size range described and each plant comprised only one or very few rosettes. Unfortunately, none of the plants were in flower. A bit later, further down the road and closer to 900 mtrs elevation, I experienced the thrill of encountering a patch of larger, even more strikingly attractive, silvery rosettes in relatively dense colonies. The plants were quite variable, particularly in the size and shape of the leaves, but overall this was a better match for the description of *Dyckia joanae-marcioi* with respect to vegetative characteristics. A few plants had developing inflorescences and I eventually found a single plant in flower. This then created some doubts, as the floral characteristics varied slightly from the description. In particular the flowers did not have pedicels 3-5 mm long (they were almost sessile), the apices of the petals were not reflexed and the stamens and stigma did not exceed the petals. However, I also noticed some inconsistencies between the description and the accompanying image in the protologue of part of the inflorescence so was left wondering – how reliable was the description and how many inflorescences was it based on? I'd previously noticed that floral characteristics in natural Dyckia populations could be a bit variable so thought that relatively minor differences may not be significant if the original description was based on a very small sample, especially since I had only one inflorescence for comparison and no idea how typical or not it might be of the general population.
I can't know for certain whether the population of larger plants that I found is the same one from which the type specimen was collected, but at the time it was described it was known only from single population. The population is on the western slope of the range. Although the plants occur predominantly on or near rock outcrops, they are mostly very small outcrops in a low woodland so the plants are often sheltered from full sun. The population occurs over a fairly large area and comprises many hundreds of plants. The area is grazed by cattle and some plants had been trampled, uprooted or chewed. I expect the plants have lived with grazing for many decades, but it is possible that grazing may cause a long term decline in the population. No seedlings were evident and it is likely that recruitment occurs only during occasional exceptionally favourable years.
Despite some discrepancies between the description and plant characteristics, I felt confident that the group of larger plants that I'd seen was *Dyckia joanaemarcioi*. If that is the case, where does this leave the smaller plants that I saw earlier, at a higher elevation? I also saw very similar small plants at another locality about 10 klm north, where they were growing with what I think was *Orthophytum eddie-estevesii* (which unfortunately was not flowering).
Are the plants at both of these other localities also forms of *Dyckia joanae-marcioi* ? As often seems to be the case when you see bromeliads, especially Dyckias, in natural populations, the variation is greater and more complex than brief botanical descriptions might suggest. I was left pondering. Were all three groups just part of a larger, more variable and much more extensive population of *Dyckia joanae-marcioi* than was known to Braun and his colleagues when they described it, or is there more than one species of silver-leaved Dyckia in the Serra Geral ? Perhaps another species has been described from this area and I have just overlooked the description. Otherwise, more thorough investigation of the area and a larger number of flowering plants are needed to answer this question. Regardless of what they are, all the plants are very attractive and well worth seeing.

Web: bromeliads.info

***Dyckia*: A Prickly *Pitcairnioideae*. Author: Celeste Booth**

Dyckia is a genus of bromeliad found within the *Pitcairnioideae* subfamily of bromeliads. There are 120 different species of *Dyckia* with many more cultivars. Each species of *Dyckia* is unique, but there are several characteristics that apply to most, which make them standout from other bromeliads.

Origins of the Dyckias

Most Dyckias are native to Brazil, but a few originate from other South American countries such as Uruguay, Paraguay and Bolivia.
They prefer sunny and rocky terrain up to about 6,000 feet in elevation. Some *Dyckias* are saxicolous meaning they live attached directly to rocks. However, most are terrestrial, growing in the ground. The majority of other bromeliad genera are epiphytic. Another unique characteristic of the *Dyckia* is its ability to survive cold temperatures. Nearly all bromeliads cannot tolerate frost. However, many *Dyckia* can survive temperatures that drop into the teens(F). They won't survive through harsh northern winters, but they can survive in outdoor gardens in a few climate zones that won't support most other bromeliads.
-Dyckias are often confused with succulents because they look and play the part. They have stiff leathery leaves and are very drought tolerant, but unlike true succulents they cannot store their own water internally. They simply respond to periods of stress, such as dry weather conditions, by going dormant.

Form - Dyckias typically have long narrow leaves. Almost all Dyckias have sharp spines or hooks around the margins of each leaf. Dyckias can be found in shades of red, green, yellow and silver. Many of the plants appear to have a beautiful silver flocking on the spines and edges of the leaf. The leaves form a tight rosette that often curves down around itself, and they can drape beautifully over the sides of containers. They range in size from just a few inches across to several feet wide. Many of the plants within the genus have tall flower spikes that tower above the foliage. The flower spikes often produce only very small flowers in oranges, reds and yellows.
-Dyckia hybrid
Unlike most other bromeliads, Dyckias can flower seasonally. Bromeliads are typically known for producing only one flower and then dying. Before they die they produce pups. Dyckias will continue to grow after they flower and even have the ability to flower again. A *Dyckia* planted from seed can take up to three years to reach maturity and bloom. Since Dyckias can continue living as long as they are well cared for, it is important to pay close attention to their container and potting medium.
Potting -The majority of bromeliads have very small root systems in which a small pot can house a full grown plant. In most cases, the bromeliad roots act only as anchors and not a primary source of nutrients. Dyckias, on the other hand, have extensive root systems and require containers that are at least as large as the plant itself. Dyckias will usually grow into the size of the pot where it is planted.
Propagation - Some Dyckias produce pups or offsets which is common among bromeliads. Other species don't produce pups, but divide at the head. When planted in the ground, Dyckias can make thick ground cover. When grown in a pot, Dyckias will eventually need to be separated and replanted. Remove pups when they are at least half the size of the mother plant. Dyckia pups grow new roots very slowly. You can use a rooting hormone to encourage growth. Use a small pot until the roots are established and then repot in a larger container. You can employ a small saw to separate plants that have divided at the head. This is very difficult to accomplish without damaging one or both of the plants. Take care and time to separate the plants with as many of the roots intact as possible.
Even if you don't want to separate your plants it is wise to repot them after two or three years. By this time the nutrients in the potting mix will be depleted. Carefully remove the plant. Then dump out any remaining potting mix. Clean the container well and rinse it well. Then place a new, well draining potting mix in the container and situate the plant back in the container. The Bromeliad Society/Houston recommends using a potting mix heavy in organic matter and includes water retaining polymers. Small rocks and pebbles make an excellent top dressing. Always use gloves and wear long sleeve shirts when handling sharp Dyckias.
Water - Dyckias can survive drought conditions but do not thrive in them. During the growing season – spring and summer – they require plenty of water. When they become too dry they will first stop growing and then wilt. They recover quickly once watered. Use fertilizer to encourage growth during the spring and summer. Stop fertilizing and allow the plant to dry more between waterings during the winter.
Sunlight - -Dyckias Need Plenty of Sun. Dyckias enjoy full sun. They can also tolerate lower light levels, but it may change the color of the leaves. The Bromeliad Society/Houston suggests 5000 foot-candles for best results when growing a Dyckia.
Varieties - There are many popular varieties of Dyckias for beginner growers, as well as rare species that will entice bromeliad enthusiasts. Prices range from $10 dollars to $155 for the most rare species.
Dyckia 'Arizona' is a popular cultivar that has narrow burgundy leaves with white spines. The rosette forms a beautiful star shape. The cultivar is particularly adapted to arid climates.
Dyckia 'Naked Lady' is a cultivar that is spineless. It has light green to yellow leaves. This plant can grow over 12 inches tall.
Dyckia fosteriana has beautiful silvery white leaves with many spines. It forms a tight rosette with leaves that drape downward. The plant can grow up to 8 inches wide.
Dyckia 'Cherry Coke' has glossy leaves. Its name is suitable because the leaves are the color of Cherry Coke. The plant can grow very large with leaves up to 2 feet in length and displays a 4 foot upright flower stalk. The plant also pups well.
Dyckia delicata comes in various forms. Leaf colors include green, red and silver depending on the form of the plant. All forms appear to be beautifully flocked with silver. Native to higher altitudes in southern Brazil, these plants are well suited to cooler winter weather. It is a beautifully shaped plant with a tight rosette draping downward.
Dyckia brevifolia has short, wide green leaves with very small spines around the margins. While drought tolerant, these plants can also survive chilly and wet weather. They grow about 8 inches wide and have a beautiful small yellow flower which grows on a flower stalk.
All Shapes and Sizes - Dyckias come in all shapes and sizes. They share in common their love for sun and tolerance for drought. They do not require the moist, humid conditions that so many other bromeliads do. They are long-living and beautiful in form and color. These plants are an excellent addition to a mild climate landscape or a bromeliad enthusiast's rare collection. Dyckias are another enjoyable expression of the vast family of bromeliads.
Sources
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