

Between the Ribs:
exploring the genus
Astrophytum



Agenda

- Characteristics of the genus
- Species tour
 - Ornatum
 - Capricorne
 - Coahuilense
 - Myriostigma
 - Caput Medusae
 - Asterias
- Cultivars & the Japanese influence
- Cultivation & Propagation
- Species identification & resources



Characteristics of the Astrophytum Genus

- Star-like shape when viewed from above.
- Trichomes are an evolutionary adaptation to reflect light – natural sun screen.
- All but two species are spineless
- Distinctive yellow funnel-shaped flowers
- Rib and areole structure allows for the plant to contract and expand
- Range: NE/Central Mexico and south Texas
- Habitat: limestone, gravelly flats, thornscrub



Astrophytum ornatum

- Largest species in the genus
- Latin for "ornamented/adorned"
- Considered the most primitive species in the genus
- Columnar with horizontal bands of trichomes
- Easiest species to grow in cultivation; fast growing
- One of the first cacti to be exported from Mexico to Europe in the 1800s



IUCN Vulnerable Cactaceae
Astrophytum ornatum
central Mexico

Astrophytum ornatum cv. Fukuryu

- Fukuryu – "crawling dragon" or "overlapping ridge"
- Unpredictable growth patterns
- Columnar with concentrated areas of trichomes
- Fukuryu traits are recessive and unstable.
- Two types of Fukuryu
 - Type A- shortened/aborted ribs
 - Type B – additional ribs



Astrophytum capricorne

- Twisted 'goat-horn' spines
 - Camouflaged against the tangled dry grasses and thornscrub of its native habitat
- Evolutionary bridge between myriostigma and ornatum
- Robust; great plant for beginner collectors
- Misidentified in early literature as a Mammillaria
- The chaotic nature of its spines make no two plants alike



Astrophytum capricorne cv. Buffalo

- Named for the Buffalo horn texture and curling
- Pushes crazy spines to the extreme
- Blends symmetry with chaos
- Stronger the light, the thicker and more pronounced the spines grow
- Highly sought after by collectors



Astrophytum coahuilense

- Endemic to Coahuila
- Genetic studies found this species more closely related to capricorne and ornatum
- Classic example of convergent evolution
- Rare in cultivation, minimal cultivars and hybrids



Astrophytum myriostigma (Bishop's Cap)

- Name is Greek for countless spots
- The Type Species for the genus
- 3–10 ribs; 5 is most common
- Spineless
- Many forms of this species
 - Bicostatum
 - Tricostatum
 - Quadricostatum



Astrophytum myriostigma cv. Onzuka

- The most beautiful and sought after variation
- Developed in the mid 70's by Mr. Tsutomu Onzuka while crossing *tricostatum myriostigma* with *myriostigma nudum*
- Older plants tend to suddenly die and require more care to maintain



Astrophytum myriostigma cv. Fukuryu

- Wart like protrusions create unique textures between the ribs
- Usually solitary but some proliferum variations do exist
- Uneven trichome distribution
- The Fukuryu trait is a somatic mutation affecting rib development; not a separate species



Astrophytum caput-medusae

- Not discovered until 2001
- Snake-like tubercles that make it the oddball of the genus
- Formally known as *Digitostigma caput-medusae*
- Originally sold on the black market for thousands of dollars
- Flowers near the tip of the tubercles
- Often grafted due to being a sensitive plant



Astrophytum asterias

- in the wild it is quite cryptic
- Spineless; dense white flecks common
- Native to very small areas of TX & NE Mexico; endangered
- Typically grows near a nurse plant in the wild

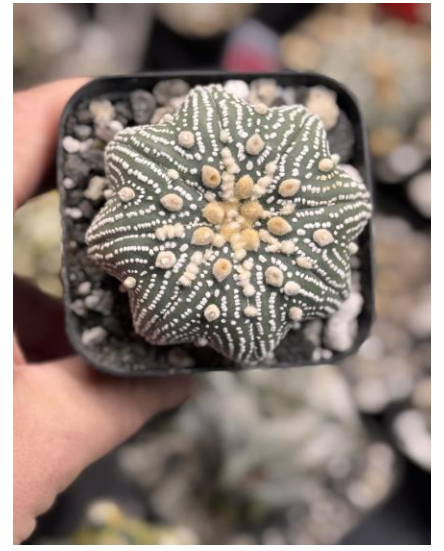


Astrophytum asterias cv. Super Kabuto

- Discovered in 1981 in a US garden center and sold to a Japanese grower
- The most popular cactus cultivar
- Not a true form of asterias; has been hybridized with capricorne and possibly other *Astrophytum* species
- Covered in unique patterns of trichomes



Astrophytum Asterias cultivars



Cultivation & Propagation

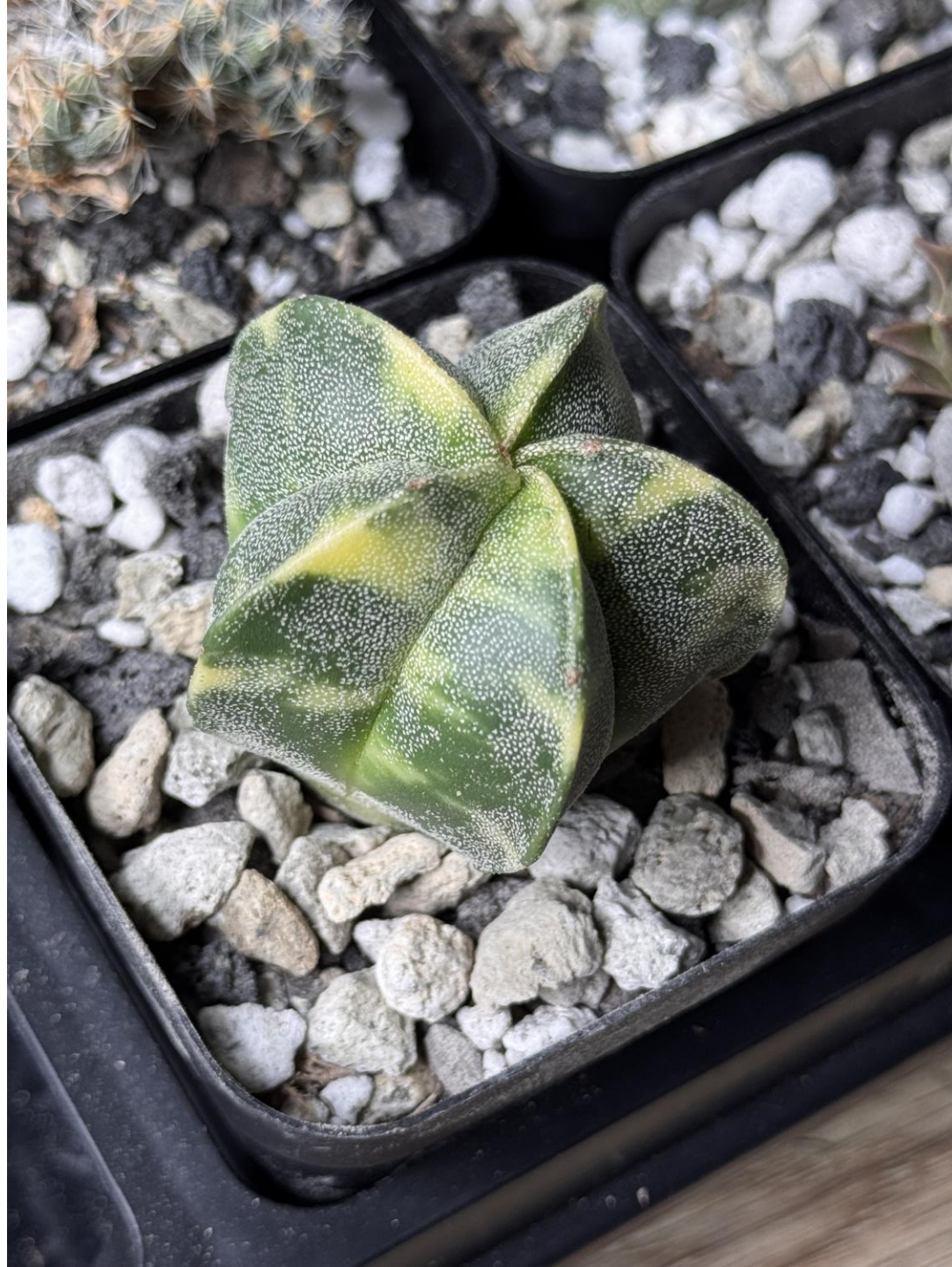
- Generally each species will thrive in cultivation with similar soil mixtures
 - Very fast draining, gritty & airy mineral mix with minimal organic material (80% inorganic)
- Asterias and Caput medusae are the most prone to root rot and should be watered minimally and allowed to dry
- Ornatum and Myriostigma are the most beginner friendly
- Capricorne is easy to grow but requires strong light to grow the best spines
- All species require excellent airflow to avoid fungal issues
- To get your Astrophytum to bloom provide it strong sun with consistent warmth
- Sowing seed is easy and germination usually takes 7-14 days
- Seed propagated asterias are extremely variable; one seed pod will net you many versions due to the genetic diversity of the species



spot the
species!

















Resources

- Kew POWO — [accepted names & distribution](#)
- USFWS ECOS — [Star Cactus profile & Recovery Plan](#)
- Texas Parks & Wildlife — [Star Cactus notes](#)
- Center for Plant Conservation — [Star Cactus summary](#)
- Trex Plants — [habitat & cultivation notes](#)
- Picky and Prickly Plants — [A guide to Asterias hybrids](#)
- Crime Pays but Botany Doesn't — [Understanding Evolution with Astrophytum Asterias](#)



Questions?

