

Other Succulents and Xerophytes Complete List 2022

Abromeitiella lotteae

Bromeliaceae. Little 1–2" rosettes of small triangular leaves, green with silver-gray flecking. Will eventually form large dense mounds to several feet across. Small tubular wine-red flowers with green tips. This rare red flowered species from southern Bolivia is exceedingly scarce in cultivation. The recent popular trend in genetic studies is to lump *Abromeitiella* into the genus *Deuterocohnia*, but there is plenty of valid reason to keep this unique genus intact. Z9b? 3"+ plant 3–4 years old \$18.50

Genus *Adansonia*

Bombacaceae. The mythical and revered Baobab. A small genus of gargantuan trees. Native to Africa, Madagascar, and northwest Australia. Huge swollen trunks, deciduous leaves, large pendulous flowers, and football size fruit. Undoubtedly one of the most impressive life forms that has sprung from the soils of our fertile planet. Known to live for thousands of years, these massive beings are held sacred and worshipped as fertility trees. Provides food, water, medicine, and shelter. Easy from seed; just nick and soak until swollen, then sow 0.5" deep. Keep warm to germinate in 1–4 weeks. Seedlings like good drainage and lots of root room. They do well in the greenhouse or a sunny window. Baobabs are slow growing and make fascinating bonsai subjects. Keep relatively dry in the winter. Z10a.

***Adansonia digitata* "Baobab"**

African tree to 60' with the thickest trunk in the world; up to 30' in diameter! Large white heavily scented flowers, followed by foot long fruits filled with citrus flavored pulp. Edible seeds and leaves are used as an immunostimulant against dysentery and malaria. Bark used to treat fevers.

5 seed \$3

***Adansonia 'samibarensis'* "Baobab"**

Supposedly a new species of baobab, we can find no information on it. Of African origin, likely a unique, extra fat population of *A. digitata*.

sold out

***Adansonia saurezensis* "Baobab"**

A very rare and majestic Madagascar baobab tree to 100' tall. Straight trunk and large red flowers. Extinction may be imminent...

sold out

Genus *Agave*

Agavaceae or Liliaceae. A fascinating genus of woody lilies consisting of some 300 species native to the Americas. Symmetrical rosettes of rigid, often heavily toothed and spiked leaves. Known as "century plants", they take 10–20+ years to bloom, after which the blooming rosette dies. The flowering stalks can be huge, up to 20'+, bearing hundreds of flowers. Archaeological evidence indicate that *Agave* have had an important relationship with man for at least 9,000 years. They are now grown around the world for the tough fiber the leaves contain. The heart of many species has long been eaten as food and fermented into various alcoholic beverages including pulque, mescal, and tequila. Recently *Agave* syrup has become a popular natural sweetener. Our interests focus on ethnobotanically important species as well as the hardiest of the horticultural gems the genus offers. We have selected those most adaptable to varied environments, especially temperate climates. Very easy to grow from seed, plant just under the soil and keep warm to sprout in 1–4 weeks. Well draining succulent soil and hot sunny position once established. Fantastic landscape plants. Also see our Andean Ethnobotanics section.

Agave albopilosa

A recently described species that is totally unique within the genus. Solitary porcupine rosettes to 1' high and 20" across. Slender recurved green leaves. Mature plants develop a fringe of white hairs surrounding the black spine at the tip of each leaf. Endemic to Huasteca Canyon, Nuevo Leon, Mexico, 3000–4500'. Grows in a humid locale on very steep canyons walls that only get a few hours of direct sun each day. Well draining substrate, regular water, and some shade will encourage it to thrive. Exceedingly rare. Z7b? *inquire for plants*

***Agave applanata* fma. *variegata* "Cream Spike Dwarf Agave"**

Beautifully sculpted compact miniature rosettes to only 4–6". Blue-green leaves with cream colored variegated margins and red-brown marginal spines. Inflorescence to 5'+ with yellowish flowers. A gorgeous dwarf, sometimes mislabelled as *A. parryi* or *A. patonii minima variegata*. Z9a

2–3"+ plant \$9.50

***Agave cordillerensis* BK09511.1 "Llacay Blanco"**

Agavaceae. Clustering rosettes to 6–8'+. Leaves gray-blue with toothed margins. Flower stalks to 20' with curved or sometimes looped branches, yellow flowers. For decades botanists dismissed this Andean agave as *A. americana*. G. Pino recently redescribed it as its own species based on its stouter leaves and radically different flower stalks. A beautiful, hardy and versatile species used for its leaf fibers. Widely planted as impenetrable hedgerows to fence in livestock, demarcate fields and act as firebreak. Unknown in cultivation outside the Andes. Seed from between Caraz and Huata above 9,000', foothills of the Cordillera Negra. The densest wild populations we've seen, literally thousands of plants, their slender twisted flower stalks taking on the appearance of an otherworldly forest. Z7b–8b? 3–5"+ plant 4–5 years old \$18.50 (limited)

***Agave cordillerensis* NL52409a**

Clusters of rosettes to 6'+. Gray-blue leaves. Flower stalks to 20'+ with curved or sometimes looped branches, yellow flowers. A beautiful and versatile plant. Widely planted as impenetrable hedgerows. Unknown in cultivation outside the Andes. N. Logan collection; Luribay, Bolivia, 8,000'. Z7b–8b?

3–4" plant 4–5 years old \$14.50

***Agave cordillerensis* TB17**

Tom Baldwin seed collection of this rare beauty from the northern part of its range, Miralindo, Ecuador. Z8b?

3–4"+ plant 3 years old \$12.50

***Agave cupreata* "Mescal Papatlotl"**

1–2' tall 2–3' wide rosettes of flat green leaves with nicely contrasting, large, red-brown spines. Native to highland oak forest between 5,000–6,600' in the Mexican states of Guerrero and Michoacán. The roasted heart of the plant is a preferred source for making a smoky mescal liquor, which has unfortunately led to overharvesting of both the *Agave* and the surrounding oaks for firewood. There is work underway to help locals sustainably cultivate and harvest this species. Full sun, heat and drought hardy. Cold exposure has not been well evaluated. Z9a–b? 3–4"+ plant 3–4 years old \$12.50 (limited)

***Agave difformis* "Xixi"**

Freely clustering rosettes to 2' with slender polymorphic yellow green leaves, varying from straight to hypnotically wavy, toothed to unarmed, sometimes with a silver central stripe. Flower stalk to 10' bearing yellowish to pink flowers. Native to the limestone soils of the Sierra Madre Oriental, 5–6,000', Mexico. Seed collected from El Tephe, Hidalgo. The macerated fiber was reportedly used as soap. An attractive unusual smaller species. Z8b

3–4"+ plant 3–4 years old \$11.50

***Agave gentryi* La Escondida**

A new species. Large plant up to 6'+. Impressive dark green leaves with jagged marginal spines. Flowering stalk can reach 18'. Native to the high mountains of northeastern Mexico. This particular seed is from robust populations growing in full sun and pine understory around 6,500' near the small town of La Escondida, possibly an *A. montana* intergrade. Should be tolerant of fairly high rainfall. Z7a 3–5"+ plant 4+ years old \$12.50

Agave gracilipes

Compact rosettes to 1–2'+. Fairly slender, yellowish to glaucous green leaves, red-brown to gray teeth. Inflorescence to 6'+ high, yellow to red flowers. A variable species that occurs in the mountains of southeastern New Mexico, western Texas and northern Chihuahua, Mexico. Possibly a natural hybrid of *A. parryi* ssp. *neomexicana* and *A. lechuguilla*. A comely and hardy plant, rare in cultivation. Z7a 3"+ plant 3–4 years old \$11.50

***Agave impressa* “Masparillo”**

3–6' symmetrical rosettes of bright green leaves with very attractive white markings from the bud imprints, blunt marginal teeth. Flower stalk to 10' with yellow-green blossoms. Rocky volcanic areas of Sinaloa, Mexico. Leaf sap is used for wound healing. An exquisite species of rare grace. Z9b 3–4"+ plant 3–4 years old \$12.50

***Agave inaequidens* “Maguey Bruto”**

Single rosettes to 8'. Yellow-green leaves with undulate margins bearing showy black teeth. Native to pine and oak forested slopes of the mountains of central western Mexico, between 6,000–8,000'. Adaptable to temperate climates. Z9a 3–4"+ plant 3–4 years old \$11.50

***Agave isthemnsis* “Dwarf Butterfly Agave”**

Sculptured dwarf rosettes of broad, pale blue leaves with an awesome filigree of spines along the margin. Known only from a few locales in Oaxaca, Mexico. Makes a great potted specimen or windowsill companion. Z9b or 10a 3–4"+ plant 3–4 years old \$11.50

***Agave macroculmis* “Maguey”**

Singular rosettes to 4'. Broad, deep-green or bluish leaves with formidable teeth. Yellow flowers. Another high mountain species from Mexican oak and pine forests, 7,000–10,000'. Gentry reports that the young flower stalk is cooked and eaten. Related to *A. gentryi* and *A. montana*. Hardy, fast growing and tolerant of some shade. Z7b 3"+ plant 3–4 years old \$13.50

***Agave montana* “Mountain Agave”**

This sculptural beauty grows as a 3'+ tall and 4'+ wide, dense, solitary rosette of broad, gray-green leaves with jagged leaf imprints, and outstanding reddish thorns along the margins. Flower stalk to 15'. Native to the high mountains of northeastern Mexico, it is found in oak and pine forests up to 11,500'. This awesome new species is extremely well adapted to cold and wet climates. Z7a 3–6" plant 4+ years old \$15.50

***Agave ovatifolia* “Noga” “Whale’s Tongue Agave”**

A recently described and highly desirable species. Dense, rounded, solitary rosette 3–6' across and 2–5' tall with short, broad, lightly cupped leaves, an amazing glaucous silver-blue color. Inflorescence up to 14' tall with green-yellow flowers. Endemic to a small area of mountains in Nuevo Leon, Mexico, between 3,700–7,000'. One of the most beautiful of all *Agave*! Tolerant of both drought and cold. Well suited to temperate climates. Z7b 3–4"+ plant 4+ years old \$15.50

***Agave parryi* “Mescal” “Maguey”**

Rosettes of gray-green leaves with hooked spines along the margins and tipped with a sharp black spine. Forms clusters to several feet in diameter. Flowering stalks can reach nearly 20' in height. Bears numerous orange-yellow flowers. A variable species native to Arizona, New Mexico, and Mexico. Natives have long used the plant as an important source for fiber, food, soap and medicine. A potent wine was made by fermenting the heart of the plant. Dried flower stalks have become a popular source for making didgeridoos. Seed from northern Arizona populations growing near 7,000'. Z6b 3"+ plant 4 years old \$10.50 or 3 for \$26

***Agave tequilana* “Mezcal Azul” “Tequila Agave”**

The famous tequila *Agave*! Large blue leaved rosettes to 5–6'. Inflorescence to 18', greenish flowers. Known primarily as a cultivar, its origins need elucidation. Thousands of acres are cultivated in Jalisco, Mexico for the heart of the plant, which is very high in fructose and other sugars, used for tequila production and more recently for agave syrup as a natural sweetener. To make tequila it takes about 15 lbs of of the plant heart to produce 1 liter of tequila. The heart is steam cooked in ovens, macerated, the juice then anaerobically fermented in large vats, steam distilled and aged in oak kegs. Seed is very scarce as the flower stalk is usually cut to encourage sugar production and commercially the plants are only propagated vegetatively. This has led to genetic poverty within the species, thus growing the plant from seed is essential. Tolerant of only mild frost. Z9b Plant 3–4 years old \$15.50 (limited)

***Agave tequilana* fma. *variegata* “Mezcal Azul”**

Coveted variegated form of the tequila *Agave*! Blue-green leaves have a cream and occasionally pink stripe along the margins. Rooted offsets. Z9b 2–3"+ plant \$16.50 (limited)

Agave toumeyana* ssp. *bella

Clusters of small rosettes of pointed leaves to 6". Flower spikes to 5', with pale yellow flowers. Seed from Gila County, Arizona populations. A beautiful miniature species, does well in the rock garden or a pot. Z7b 3–5" plant 4–5 years old \$12.50 (limited)

Agave victoriae-reginae

A most attractive specimen! Solitary, spherical rosette to 2' in diameter. Numerous stout leaves with white margins and tipped with black spines. Flower stalk up to 12' tall bearing a multitude of yellow blooms. A Mexican species that can take several decades to flower. Easy, excellent landscape plant. Z7b 2–3"+ plant \$9.50

Agave vizcainoensis

2–3' rosettes of broad, dark gray-blue/purple leaves with intricate marginal spines. 6–10' inflorescence with yellow flowers. Endemic to the Vizcaino Desert, southern Baja. A gorgeous and coveted species that prefers dry conditions. Z9b 2–3"+ plant 3–4 years old \$11.50

Genus *Aloe*

Aloaceae or Liliaceae. Large genus centered in South Africa and extending to Madagascar, northern Africa and Arabia. Rosette forming perennials that range from large trees to tiny miniatures. Succulent leaves often with attractive ornamentation and racemes of brightly colored tubular flowers are characteristic of the genus. All *Aloe* are CITES listed and many are quite rare and endangered. Many species of *Aloe* have been used medicinally for centuries. The mucilage (or gel) of the inner leaf is applied externally to soothe, heal and moisturize the skin. The gel contains glycoproteins and other substances that speed cell regeneration, protect against infection and radiation burns from both UV and X-rays. It is also a popular and effective folk

remedy for many forms of skin cancer. *Aloe* juice is used internally, fresh or dried, as a laxative and purgative as well as for arthritis, intestinal disorders, cancer, sterility, menstrual problems and many other ailments. A few species are quite toxic and utilized as hunting poisons. The most famous of the genus is undoubtedly *Aloe vera* (= *A. barbadensis*) which has found its way into all kinds of modern cosmetics and health care products. The majority of *Aloe* species are easily cared for, normal succulent culture is required. Sow seeds just below the surface of the soil mix and keep warm for germination in 1–4 weeks. Most species are easily propagated from both seed and cuttings. *Aloe* make great landscape plants, especially the arborescent ones, and are also readily adapted to pot culture. Hummingbirds are important pollinators and flowering *Aloe* bring many visitations Spring and Summer. *Aloe* are truly beneficial plants that no household should ever be without!

***Aloe arborescens* “Bitteraalwyn”**

A large multi branching plant to 10' tall with dense spiraling rosettes of narrow, wavy, light green leaves and scarlet, orange or yellow flowers. One of the sources of medicinal Cape aloes resin. Leaf sap is often used externally for skin problems and a tea is made from the leaves and roots which is drunk for arthritis, hypertension and stress. Z9b
Seed packet \$2.50

***Aloe dichotoma* “Kokerboom” “Choje”**

One of our favorite *Aloe*. Arborescent, up to 30' tall, forming a large bronze colored smooth trunk to 3 feet in diameter. Multibranched with rosettes of slender blue green leaves edged with tiny teeth. 12" panicles of yellow flowers. Native to Namibia and South Africa. The stems were hollowed out by bushmen and used as quivers for arrows. Wild populations are dying because of a lowering of the water table due to human consumption. Z10a
Seed packet \$3

***Aloe ferox* “Umhlaba”**

Large, single stemmed plant 6–10' tall with the old dried leaves covering the lower portion of the stem. Broad, thick and spiny red-green leaves up to 1 meter long. Huge, dense, multi-branched spikes of red, orange and occasionally yellow flowers. The most common source of Cape aloes, commercial plantations have been started in Albertinia, South Africa. Portrayed in bushman rock paintings and the flower nectar is said to have narcotic properties. Z9a–b
Seed packet \$3

***Aloe greatheadii* v. *davyana* “Kgophane”**

Clumping, stemless rosettes of blue-green leaves with white patterns and spiny red-brown edges. Pink to coral red flowers. One of the sources of Cape aloes resin. Utilized in rainmaking rituals by the Kgatla people and widely used as a snake bite cure. The leaf gel is excellent for bruises and burns. It has also been observed that bees raised exclusively on the flowers of this *Aloe* become unusually vicious. Makes a great potted plant. Z9a
Seed packet \$3

***Aloe globuligemma* “Gava Kava”**

Creeping stems and long thin leaves with small white marginal teeth. Yellow flowers on 3' high stalks. A southern African species that is considered a powerful poison. Leaf juice was sometimes added to arrow poisons and is known to contain the toxic alkaloid g-coniceine. Z9b
Seed packet \$3

***Aloe marlothii* “Mokgopha”**

Forms a small tree up to 20' tall. Rosettes of green leaves with impressive red thorns and horizontal racemes of showy amber yellow flowers. In addition to this *Aloe* being a source of Cape aloes and a common medicine for stomach troubles, the dried and powdered leaves are popular among natives as an admixture to psychoactive snuffs. Z9a–b
Seed packet \$3
4–7"+ plant 3+ years old \$9.50

***Aloe polyphylla* “Spiral Aloe”**

Broad, flat rosettes 2–3' across. Triangular lime green leaves that grow out in an impressive spiral pattern. Flower stalks to 2' tall with red or orange flowers. Endangered alpine species endemic to the mountains of Lesotho, southern Africa. A unique and highly coveted plant. Bright light, but dislikes excessive heat. Prechill seed 30–60 days to sprout. Z8b
5 seed \$4

***Anredera diffusa*? BK14508.1**

Basellaceae. Succulent trailing vine to 24"+ long. Heart shaped leaves that turn dark purple-red in sun. Curious upright spikes with small pink flowers. *Ullucus* kin, may form edible tubers. Planted as an ornamental in Pisac and Cusco City. Reported wild in Arequipa, Peru. Edible mucilaginous leaves. Z8/9?
10 seed \$4.50

***Anredera* sp? BK08612.8**

Scrambling or hanging succulent vine with pink stems 3–8' long. Rounded pale green leaves. Slender spikes of tiny white-pink flowers are borne in mass at the leaf nodes. May produce a caudex with age. Growing on rocks and cliffs, north of Matucana, Lima Dept., Peru. An unusual, beautiful succulent plant. The leaves and roots may be edible like other members of the genus and its close relative *ulluco*. Cuttings root easily. Seed can be slow to sprout. Z9a/b?
Seed packet \$4.50 / Unrooted cutting \$12.50

Apodanthera sagittifolia

Cucurbitaceae. From a large underground caudex grows annual trailing vines to 6'+ with arrow shaped leaves. Small yellow flowers and 2" fuzzy oval fruit. Seed from Pehuen, Cordoba, Argentina. The fruit is said to be sweet but inedible? A must for caudex collectors. Z9b
Plant 4 years old \$14.50 (limited)

***Aptenia cordifolia* “Brakvygie” “Ibohloholo”**

Aizoaceae. Sprawling groundcover with succulent lime green heart shaped leaves. Bright red-pink flowers bloom Spring through Autumn. A South African native that is an important medicine for Zulu healers. Applied externally the plant is a highly effective anti-inflammatory. Leaf infusion used for sore throats and as an anti-perspirant. A black powder is made from the plant that is said to protect against sorcery and possess magical powers. The presence of several mesembrine alkaloids also found in *Sceletium*, probably account for the plant being good for calming anxiety. Simple to grow. Roots quickly from cuttings. Z8b
10 seed \$3.50 / 3 cuttings \$5.50

***Avonia papyracea* (= *Anacampseros papyracea*)**

Portulacaceae. Unusual miniature plant with cylindrical stems covered in white papery scales. Tuberous roots and white flowers. An extreme xerophyte native to the hot quartz deserts of South Africa. Has a long history as being used as a yeast plant for baking bread and brewing mead. The closely related *A. rhodesica* has an apparent use as a hallucinogen and is prohibited in Zimbabwe because of the powerful intoxicating effects it can produce. Germinate the dust like seeds as you would cacti. Plants do best in bright light, a very porous soil and regular watering. Z9b
Seed packet \$4

***Barbaceniopsis vargasiana* BK14513.4**

Velloziaceae. Dense clusters of slender, stiff, leaves to 3", forming mats to several feet across. Leaves are dark green with moisture but turn a dark purple-grey in the dry season. Star-shaped pale pink flowers held on slender stems above the plant. Dry rocky slopes above the Apurimac River, Peru, near 6000'. Should be extremely drought hardy when established. Will do well in any succulent collection. Seed sprouts in 2–3 weeks. Z9b?
Seed packet \$4.50
2"+ plant 4–5 years old \$19.50 (limited)

Boophane disticha “Gifbol” “Incwadi” “Leshoma”

Amaryllidaceae. Large bulb usually growing partially above ground. Annually produces a dense umbel of numerous pink-red flowers followed by a fan of blue-green strap-like leaves. Occurs sporadically throughout southern Africa up into central Africa. This bulb has a long and extensive history of ethnobotanical use. Applied externally for skin diseases and wound healing. Weak decoctions are said to be an effective sedative. An arrow poison was made from the bulb mixed with *Euphorbia* latex. The plant is still sometimes utilized as a hallucinogen for divination, overdose is often fatal. Slow growing, usually flowering after 6–8 years from seed. In the wild plants have been found with bulbs over 12" in diameter believed to be over a century old! Does best with a well draining soil, at least 50% pumice. They usually stay dormant until mid-summer. Water regularly when in leaf, dry while dormant. Cultivation is said to ward off bad dreams and bring good luck. Z9b Plant 4+ years old \$18.50

Boophane heamanthoides

Immense above ground bulb that forms clumps with age. Annually produces a dense umbel of yellow flowers that turn pink with age. Twisted upright leaves to 18" long spread from the bulb like a huge fan. Occurs in restricted areas of South Africa. Used like *B. disticha* in ethnomedicine. Z9b

inquire

Genus *Boswellia*, *Bursera*, *Commiphora*

Burseraceae. Xerophytic deciduous small shrubs to large trees, many of which have thick succulent trunks and stems. Limbs contain resin ducts filled with aromatic triterpenes and ethereal oils. When punctured the ducts ooze sap, which when dried is known as Frankincense (*Boswellia*), Copal (*Bursera*) and Myrrh (*Commiphora*) and has an extensive history of religious and medicinal usage. The wood of a South American *Bursera* is sacred, known as Palo Santo. *Boswellia* and *Commiphora* are African and Indian genera while *Bursera* is primarily a Mexican genus with several species ranging into northern South America, and extreme southern United States. In cultivation they adapt well to bonsai culture, are easily trained and grown into striking specimens. In larger pots they respond to the extra root room, growing to become a large bush. They prefer bright light, a rich well drained soil mix and regular watering and feeding during warm weather. Protect from frost. Very easy and rewarding plants to grow, wonderful to have around, especially for their magical presence and the spicy scents they give off when handled. We propagate many rare species, inquire or subscribe to our Rare Plant List.

Boswellia sacra (= *Boswellia carteri*) “Frankincense”

Small tree to 25' with pinnately compound leaves and racemes of small white pink flowers. Usually found growing in extremely rocky areas where it sometimes develops a bizarre disc like swelling at the base of the trunk. Native to north eastern Africa and the Arabian peninsula. Dried sap from the tree is an ancient incense widely revered since the dawn of civilization, often in combination with myrrh. At one time worth more than its weight in gold! It has a powerfully rich fragrance. Used medicinally as a cure all, it has very strong anti-inflammatory, antiseptic, antibacterial and antifungal properties. Very rare in cultivation, but fairly easy to grow. It prefers a deep pot and soil with at least 50% pumice stone for its thickened edible roots. Grow like *Bursera*. The seed naturally has low viability, about 10%, which accounts for the rareness and the high value of the plant. Seed need consistent warmth, 85–95° F, to germinate in 2–4 weeks. Z10a

inquire for plants

Bursera fagaroides “Copal”

A really wonderful plant. Shrub or small tree to 20'. Thick swollen trunks and limbs with smooth golden bark that exfoliates in thin papery sheets. Pinnate leaves, tiny flowers followed by purple green berries. Widespread throughout the Sonoran and Chihuahuan deserts of Mexico. The sap is the most common source of Copal, highly aromatic with a sweet citrus like scent. Dormant much of the year, leafing out only with the onset of hot weather. They defoliate in Autumn with an attractive display as the leaves change to yellow, orange and red. Z10a 5 seed \$4.50 / 8–14"+ treelet 3–4 years old \$16.50

Bursera odorata “Torote Blanco” “Copal”

One of the smaller Copal species, usually a dwarf tree under 10'. Swollen caudiciform trunk with golden peeling bark. Pinnate leaves, small yellow flowers. Mountain to coastal dry forest, Baja and mainland Mexico. The sap is very aromatic with a sweet-balsam odor. Z10a

8–12" Treelet 2–3 years old \$18.50

Commiphora mukul “Guggul” “Indain Myrrh”

Attractive small deciduous tree with spinescent branches, thickened trunks and gray peeling bark. Grows wild in the semi-arid states of Rajasthan, Gujarat, and Karnataka in India. The sweet smelling aromatic sap, similar to Myrrh, has been utilized in Ayurvedic medicine for over 3,000 years as a treatment for arthritic conditions and heart disease. Modern clinical studies show it to be anti-inflammatory, lower cholesterol and burn excess body fat. The trees are now endangered due to the increased demand for the resin which has led to harvesting practices that eventually kill the trees. Easy to grow, drought hardy and a natural bonsai. Z10a 5 seed \$4.50 *inquire for plants*

Calibanus hookeri

Agavaceae. Unusual monotypic genus. Forms a corky hemispherical caudex reported to reach 6' or more in diameter! Tufts of long grass-like blue green leaves grow from the top of the caudex. Endemic to the dry mountainous lands of Hidalgo, San Luis Potosi and Tamaulipas, Mexico. Locals use the leaves for weaving, thatching and scouring. Easy to grow. A great houseplant or rock garden subject. Z8b 5 seed \$4 *inquire for plants*

***Carica pubescens* BK08522.5** (= *Vasconsellea pubescens*) "Andean Papaya" "Chamburo"

Caricaceae. Pachycaul tree 8–16'+. Bottle shaped, caudex like trunk to 20"+ diameter. Very attractive digitate leaves crown the trunk. Sweet papaya fruit to 6" borne along the upper trunk and turning yellow/orange when ripe. Seed collected from Ollantaytambo, Cusco Dept., Peru, 9300'. The green fruit are cooked as a vegetable. Probably the hardest of the sweet papayas. One of the parent of the 'Babaco' hybrid cultivars grown throughout South America. Fruits well here in northern California in areas of mild frost. Folks are always shocked to find you can grow papayas here. Protect plants from freezing when young. Highly drought tolerant, though dislikes prolonged excessive heat. Can be bonsaid and grown like a caudiciform succulent. Z9a/b Seed packet \$5 / 7–12"+ treelet 2–3 year old \$19.50 or 2 for \$33

Coccinea abyssinica “Anchote” “Shushe” “Ajo”

Cucurbitaceae. Forms a large perennial caudex/tuber with annual tendrilled vines 5–15' long. Leaves cordate to 5 lobate. Dioecious yellow flowers and orange-red fleshy fruits. Native to the mountains of Ethiopia from 4300–9200'; *Podocarpus-Celtis* forests and *Euclea* scrub. Cultivated since antiquity for the nutritious edible tuber (starch & calcium rich) and young leaves and stem shoots. After 4 months from seed the tuber yield in Ethiopia is reported to be similar to potato. Interestingly the fruits of cultivated landraces are not reported to be eaten but fruits of wild plants are. Used to treat tuberculosis, cancer and to fatten livestock. The caudex/tuber is central to the cultural identity of the Wallaga Oromo people of Ethiopia, it is known as a sacred relative to pregnant women. Easy to grow, we treat it like a standard caudiciform succulent but we encourage experimentation growing it as a root crop. Z8/9? 5 seed \$4.50 For a paper on *C. abyssinica* nutrition see- <https://ejhd.org/index.php/ejhd/article/download/1018/766>

Cotyledon orbiculata “Plakkie” “Kouterie”

Crassulaceae. Small succulent shrub that has thick, fleshy silver leaves with red margins. Orange to red tubular flowers borne on long, slender stalks. A favorite of hummingbirds. Distributed throughout South Africa where it is widely used in traditional medicine. The leaves are used to soften and remove warts and a poultice is made to treat inflammations. Leaf juice is made into drops to treat ear and tooth aches. Contains several cardiac glycosides, making internal use potentially lethal. Easy, makes a wonderful landscape plant. Z8a Seed packet \$3

***Dasyliirion wheeleri* BK11223.2** “Sotol”

Nolinaceae or Agavaceae. Unique shaggy trunked plant to 5'+ tall. Rosettes of slender grey green leaves with toothed margins, like a hacksaw. The large flower spire can reach well over 12' bearing many small white flowers. Seed collected in the hills around Mimbres Hotsprings, NM above 6,000'. The strong leaf fibers were valued for making cordage, the young flower stalks roasted and eaten. In northern Mexico a liquor known as “sotol” was made from the plant. A great landscape specimen, heat and drought tolerant. Z7a Seed packet \$3

Genus *Delosperma*

Aizoaceae. Large, ill defined ice plant genus from south to east Africa, Madagascar and Arabia. Succulents of diverse habit, sprawling shrubs to miniature plants with low compact leaves and caudex. Abundant small flowers that dazzle with an almost metallic sheen. Fast from seed, sprout as you would for finely seeded cacti. Easily propagated from cuttings. Normal succulent care. Excellent groundcovers and the perfect addition to the rock garden.

The following species are \$3 per seed packet

Delosperma bosseranum –Narrow succulent leaves, white flowers, swollen caudiciform roots. Madagascar. Z10a Plant 2+ years old \$6.50 or 3 for \$15

Delosperma cooperi–Sprawling groundcover, small leaves that resemble the tails of geckos, pink-purple flowers. Z8a Unrooted cutting \$5.50

Delosperma harazianum–Small cushions of slender gray-blue pointed leaves, pink flowers. South Yemen. Reported to contain tryptamines. Z9b

Delosperma lavisae–Succulent mats to 12"+ tall, dark green leaves, large magenta flowers. An excellent and well behaved hardy groundcover. Z6b

Delosperma lehmanni– Small clusters of attractive stubby blue-green leaves, bright yellow flowers. Z9b

Delosperma steytlerae – Lizard tail leaves, white to pink flowers. Zimbabwe. Z9a

Delosperma uncinatum– Erect shrublet. 3 sided leaves. White, purple tipped flowers. Z9a

Delosperma sphalmanthoides

Dense cushion of blue-green upward pointing leaves, to about 1/2". Purple flowers. A recent discovery from the Komsberg Mountains, South Africa. The leaves have an alluring balsam scent. This miniature gem is one of our favorites. Z7b 1–2" plant \$12.50

Dermobotrys saundersii

Scrophulariaceae. Epiphytic, multibranched, pachycaul shrublet to 2–3'. Semi succulent leaves. A profusion of 2"+ pendant tubular red flowers with yellow interiors adorn the branch ends. 1.5"+ ovate shaped edible green berries with delicious fruity figgy pulp. Endangered species from the dry coastal forests of South Africa and Madagascar. This unique species does well for us grown in 50% pumice in partial shade and treated like a succulent. Z9b/10a Seed packet \$4 / Plant 2–3 year old \$16.50 (limited)

Deuterocohnia longipetala

Bromeliaceae. *Puya*-like multiheaded mounds to 2–4' made up of rosettes of recurved, toothed, silver leaves. Erect branched inflorescence with tubular yellow flowers. Seed from the dry valleys of northern Peru where it occurs up to 5000'. Another beautiful pineapple relative. Sun and drought hardy. Z9b 3–5"+ plant 4+ years old \$9.50 or 2 for \$16.50

***Deuterocohnia* sp. 'Rio Balsas'**

2'+ rosettes of recurved silver-green leaves. Said to be distinct from *D. longipetala*, we'll need to grow the plants to maturity to learn more. Possibly a new species. Seed collected along the biodiverse Rio Balsas, north Peru. Z9b/10a 3–4"+ plant 3 years old \$12.50

Dioscorea bryonifolia “Camasilla”

Dioscoreaceae. From a caudex arises a large vine with lobed, heart like leaves. Central Chile. May germinate best under cool conditions. Z9a–b 5 seed \$4

Dioscorea dregeana “Isidakwa”

Large fleshy underground tuber from which thick, hairy, twining annual vines arise. The leaves are divided into three oblong leaflets. Native to the eastern parts of South Africa. The fresh tuber is used topically for skin disease. It is considered a powerful analgesic, sedative and narcotic used to treat epilepsy, hysteria, insomnia and psychosis in traditional South African herbalism. Occasionally combined with the magic bulb *Boophane disticha* for the purpose of divination. The tubers are potentially quite toxic and only utilized by healers skilled in its use. Eaten as a famine food after leaching. Easily grown, cultivate like *D. elephantipes*. Tolerant of frost if well mulched. Z9a 5 seed \$4.50

***Dioscorea elephantipes* RW218** (=Testudinaria elephantipes) “Elephant’s Foot” “Turtleback”

Wild seed collected by R. Wagner. Forms a large globose caudex, covered in a corky bark that separates with age into superbly sculptured, prominent, polygonal tubercles. Twining annual vines arise from the top of the caudex bearing glossy green heart shaped leaves and tassels of small yellow flowers. Native to South Africa where the caudex can become massive with age, up to 2 meters in diameter and height and weighing up to 700 pounds! The inner flesh of the caudex is reportedly edible and eaten by bushmen. Plants were once nearly eradicated in the wild during the search for commercially valuable sources of steroidal saponins like diosgenin; used to synthesize cortisone and birth control pills. Fortunately, removal of plants from their habitat proved difficult and as cheaper and more viable sources of these steroids became available, collection efforts ceased. This plant responds well to cultivation and makes an easy and wonderfully unusual houseplant. Sow seeds 1/4" deep and keep warm. The caudex is initially formed underground, and though you'll want to expose it, we recommend you leave it covered for the first years because growth is most rapid this way. A must have for collectors of the bizarre! Z9b inquire for plants

Dioscorea rupicola

Develops an odd corky tuber with multi branched “fingers” and a single annual vine. Leached and used as a famine food. Probably medicinal like other South African *Dioscorea*. Z8b 5 seed \$4.50

Dioscorea sylvatica

Another South African species that forms an attractive smooth woody caudex, sometimes branched or lobed. Thin twining vines and heart shaped leaves. Decoctions of the caudex are used for chest conditions, as a blood purifier and ritual emetic. Used topically for rashes and swelling. A significant source of diosgenin. A good houseplant. Z9a 5 seed \$4.50 / Plant 3 years old \$15.50

***Dioscorea* sp. BK08517.20** “Andean Yam”

Perennial rounded caudex to 4–6"+ diameter. Annual vine to 5'+ with slender heart shaped shiny leaves. Strings of tiny yellowish flowers. Dry scrub, Moray, Cusco, Peru, 12,000'. The Andes have dozens of species of unusual *Dioscorea*, some are medicinal and some edible. With age these plants will appeal to caudiciform collectors. Normal succulent culture. Easy houseplant. Z9a/b? Plant 7+ years old \$16.50 (limited)

***Dioscorea* sp. BK08605.3** “Yungas Yam”

Medium sized annual vine to 8'+. Very Slender heart shaped leaves, clusters of yellowish flowers. Long cylindrical brown tuber/caudex. Found growing on *Anandenanthera colubrina* trees, and the bizarre columnar cactus *Yungasocereus inquisivensis*. Near the vast Tiwanaku/Incan ruins of Pasto Grande, Sud Yungas, Bolivia, 6,000'. Tubers of this lovely species are similar to cultivated yams, but we can make no claims to edibility. Worth further study. Z9b?
5 seed \$4 / Plant 7+ years old \$15.50 or 2 for \$26.50

***Dioscorea* sp. BK10509.2** “Andean Yam”

Vine to 10'+, large heart shaped leaves. Elongated tuber/caudex. Growing on *Alnus* trees near the river below Inkallajta, Cochabamba, Bolivia, 10,000'. An attractive yam species, we wish we knew if it is edible! Z9a–b? Plant 7+ years old \$17.50 (limited)

***Dudleya abramsii* ssp. *murina* BK0612.2** CA Native

Crassulaceae. Rosettes of slender glaucous leaves from a small branching caudex to about 4". Flower stalks to 6" with small purplish flowers. Endemic to the serpentine outcrops in the hills around San Luis Obispo. Sow seed like cacti. Plants need bright light and a dry Summer rest, when the leaves will shrivel until Autumn rains revive. Z9a–b Seed packet \$4

***Dudleya caespitosa* BK0612.3** CA Native

Upright branching stems to 2" thick and 12" tall, topped with rosettes of silvery lanceolate leaves. Large flowers stalks to 16" with dozens of yellow flowers. Loved by hummingbirds. A coastal species, found in sandy soils from Los Osos north through Monterey. Seeds from Los Osos populations. Keep relatively dry in Summer. Z9b Sold out

***Dudleya collomiae* (= *Echeveria collomiae*)**

3–4" rosettes of succulent pointed leaves, glaucous blue with white powdering. Red stemmed flower stalk to 12" high with yellow blossoms. Mountains of Yavapai Co., Arizona, near 4500'. One of the hardier species. Regular succulent care. Z7a/b 2–3"+ plant 4 years old \$8.50 (limited)

***Dudleya cymosa* BK09725.4** CA Native

Clusters of glaucous white sculpted rosettes to 6" across. 6–10" flowers stalks bearing dozens of small pale yellow flowers. Collected on a south facing serpentine cliff, Lookout Rock, Coleman Creek, Occidental. Z9a Seed packet \$4

***Dudleya farinosa* “Bluff Lettuce”** CA Native

2–4" tall multistemmed caudex with rosettes of compact succulent leaves, green to powdery silver-blue, turning bright red with age. Red flower stalk with pale to vibrant yellow flowers. Forms extensive colonies on dunes, craggy outcrops and cliffs along the northern California coast. The leaves were eaten by a number of tribes and have an interesting astringent flavor. A diverse and beautiful species. Z8b Seed packet \$4

***Dudleya lanceolata* BK11822.1** CA Native

3–6" succulent rosettes of deep green pointed leaves. Yellow to reddish flowers. Seed collected from plants growing on serpentine rocks, oak understory, hills of San Luis Obispo, CA. Lovely and easy to care for. Sun to filtered shade. Z9a Seed packet \$4

Dudleya pulverulenta CA Native

One of the largest of the genus, forms a rosette up to 30", usually unbranched. The leaves can be up to 18" long and 3" wide, covered in a fine white powder that gives the plant an spectacular appearance. Large multi-branched flower stalk to 4' with dozens of bright red flowers. Native to isolated areas, from San Luis Obispo County, south to Baja. A hummingbird magnet when blooming. This seed is from the northern populations. Needs soil with excellent drainage and a dry summer rest. Z9a–b Seed packet \$4

***Dyckia* sp. D30-22**

Bromeliaceae. Clustering species with individual rosettes to 12"+. Slender recurved leaves, olive-green developing a silver frosting with age. Red to black marginal thorns. Upright inflorescence to 3'+ with vibrant orange flowers along the stalk. Possibly a new species from Bolivia. Z9a/b? Seed packet \$4

Echeveria ballsii

Crassulaceae. Short stemmed, clustering rosettes of slender dark green leaves with red-purple margins and speckles. Peach-red flowers with yellow interior. This rare species from the cloudforests of Columbia was thought to be extinct in the wild until recently rediscovered. This clone collected by Robert Wellens, Masquera, Cundimarcana, Columbia. Prefers a bright, cool environment. Z9a? 2.5–3"+ plant \$12.50

***Echeveria cerrateana* BK09514.1**

A very distinct plant. Forms 6"+ rosettes of slender leaves with a central furrow, dark green to dark purple-green or even black in color, sometimes with red-brown highlights. Peach colored flowers. Growing on steep rock cliffs with *Tillandsia* species and an impressive population of serpent-like *Trichocereus peruvianus*, Fortaleza Canyon, on the descent from Conacocha and well before Cajacay, Ancash Dept, about 10,000'. New species we just helped describe with G. Pino. Z9b 2–3"+ plant 4+ years old \$24.50 (limited)

***Echeveria chilonensis* BB004.18**

Clustering rosettes of oblanceolate leaves on stems to 5" high. The plant is an olive-green to grey color with a reddish-purple blush. Pale yellow flowers. Very rare beautiful Bolivian species from the mountains of Betanzos, Potosi Dept. New to cultivation. Z9a–b 2.5–3"+ plant \$15.50

***Echeveria chicleensis* BK08612.6**

Large rosettes to 10" or more. Slender leaves are blue-green, blushed an amorous purple or red. Deep yellow flowers with orange hues. G. Pino took us to see this lovely species growing amongst scrub next to the embankment on the side of the road near Chicla, Lima, Peru, 12,000'. Z9a

inquire for plants

***Echeveria chicleensis* v. *backbergii* BK08612.2**

Lovely blue-grey rosettes to 6". Slender pointed leaves, yellow flowers blushed orange. Similar to some of the California *Dudleya*. Growing on rocks, often in association with *Trichocereus peruvianus*. Near Matucana, 8,600', Lima Dept., Peru. Another superb species scarcely cultivated. Z9a/b Seed packet \$4 / 2"+ plant 3+ years old \$15.50 (limited)

***Echeveria cuscoensis* BK09426.1** “Loraypo”

Beautifully sculpted, pale blue-grey rosettes to 6", clustering with age. Orange-yellow flowers on stalks to 12" long. Growing on rocky cliffs on the north side of the upper Kitamayo Gorge, 11,000', Pisac, Cusco Dept., Peru. We helped to map the ecological distribution of this lovely plant and recently co-authored with G. Pino a paper describing it as a new species. Z9a/b 2"+ plant 3+ years old \$19.50 (limited)

Echeveria eurychlamys

Single dense rosettes to 3–6". Wide leaves, light green-blue with a white to pinkish blush. Inflorescence initially nodding then erect, covered in rounded bracts, yellow to salmon colored flowers. Rocky areas of Cajamarca Dept., Peru, between 6,000–11,500'. One of the most attractive Andean *Echeveria*. Prefers strong, bright light and a very porous soil. Surface sow seed. Z9a–b Seed packet \$4 (inquire for plants)

Echeveria krahnii Krahn1078

Small profusely clustering rosettes of olive to yellow-green leaves. Horizontal to ascending flower stalks with light pink stems and yellow-orange flowers. An unusual new species discovered in 2004 by W. Krahn growing on steep cliffs with epiphytic cacti, bromeliads, *Begonia* and *Peperomia*, Quebrada de Incahuasi, Azero Province, Chuquisaca, Bolivia, 4000'. Type collection. Z9b 2"+ plant \$13.50

Echeveria laresensis BK10428.10

2–4" rosettes of pale-blue diamond shaped leaves, eventually forms clusters to 10"+. Horizontal flower stalks bearing reddish flowers with yellow tips. Growing with *Tillandsia*, *Peperomia* sp., succulent *Oxalis* sp., and ferns. Steep mountainside across from Lares Hot Springs, 11,300'. We discovered this species in 2008, believing it to be *E. decumbens*, taxonomical work we recently authored with G. Pino has shown it to be a brand new species. Known by the Quechua name "loraypo", the leaf juice is highly valued for treating cataracts and earache. Z9a/b 2"+ plant 3 years old \$19.50 (limited)

Echeveria oreophila Bauer & Kimnach 10 "Pinpin"

Thick, branched stems 3–6"+ long, crowned with 3–5"+ diameter rosettes of thick, glaucous blue-green leaves with reddish margins. The plant turns purplish in strong light. Pale pink flowers. This clone is the holotype collection from Cumbemayo, Cajamarca Dept., Peru near 11,500'. A popular ornamental in the towns near where it occurs. Used medicinally for earache and eye troubles. Said to be the easiest Andean species to grow. Z9b inquire

Echeveria westii BK08521.7 "Loraypo"

Beautiful red-purple to bluish compact rosettes, a small sculptured jewel. Orange flowers. Growing on rock outcrops near Ollantaytambo, Cusco, Peru. Originally described by Walther in the 1950s, but exceedingly rare in cultivation. Used medicinally for cataracts and earache and figures prominently in the weavings of some Quechua communities in the region. Z9b? 1–2"+ plant 3+ years old \$15.50

Genus *Ephedra*

Ephedraceae. Bizarre primitive gymnosperms with nearly leafless photosynthetic jointed stems. Small flowers and fleshy berries. A link between flowering plants and conifers. Most species are native to arid regions across the Americas, Asia, southern Europe, and northern Africa. These interesting plants have been highly valued by many cultures as food and for their medicinal and stimulant properties. Many species contain ephedrine alkaloids, powerful antihistamines and psychoactive CNS stimulants. Sow seed just below the surface of a sandy soil mix and keep warm to sprout. Easy to grow, sun and drought tolerant.

Ephedra americana BK09509.11 "Pinku pinku"

Upright leafless stems to 3–4'. Sweet edible red fruit, these plants had some of the largest and by far the highest density of fruit of any of this species we've seen. An important medicinal used for kidney and liver, as a blood cleanser and urinary tonic, digestive aid, antiseptic, for bruises and fractures, and for fever and arthritis. Growing with a lovely stand of *Trichocereus santaensis*, west side of the Santa River, near Olleros and the ancient road that connects the Callejon de Huaylas with Chavin. Ancash, Dept., Peru, 11,000'. A great drought hardy choice for the edible landscape and companion plant for your *Trichocereus*. Z8? 5 seed \$4.50

Ephedra campylopoda

Large bushy blue-gray species, 4–6'+ tall. Prolific large red fruits and meaty seeds. Wild seed from the volcanic Methana Peninsula, Peloponnese, southern Greece. Once known as "food of Saturn". Medicinal, but does not contain ephedrine. The abundant edible fruit and seeds make it an interesting choice for the edible landscape. Drought hardy. Z8b or below. Seed packet \$4 Plant 1–2 years old \$12.50

Ephedra gerardiana "Somlata" "Tse" "Shan Ling Ma Huang"

Clumps of highly glaucous stems to 2–3'. Reddish edible fruit. Seed collected in the cold desert of the Nubra Valley, Ladakh India, around 14,300'. Rich in ephedrine alkaloids, from .28–2.79%. Important in traditional medicine throughout the Himalaya. Fresh branches used as a tooth brush, powdered stems for asthma, fever, rheumatism, headaches, liver disorders and as a blood purifier. Stems are burnt and the ash used as a snuff. Winter browse for livestock. The increasing demand for this species has raised concerns about the overexploitation of wild populations. Grow like other *Ephedra*. Z6a. 5 seed \$5 inquire for plants

Ephedra intermedia "Zhong Ma Huang" "Tse"

Erect glaucous stems to 2"+. Red edible fruit. Native to Eurasia, from dry low elevation grasslands to mountains up to 14,000'. Used in Chinese medicine similar to *E. sinica*, but contains higher amounts of the antihistamine pseudoephedrine and the anti-inflammatory ephedroxone. It also has traditional use as an aphrodisiac. Considered a substitute for the mythical Haoma. Z5b Seed packet \$4

Ephedra minima "Dan Zi Ma Huang"

Dwarf mat-forming species 4–10" tall. Yellow flowers and bright red berries. Native to dry rocky areas of China, Mongolia and Russia to 14,000'. Ephedrine rich, used in Oriental medicine like other species. Makes an unusual and hardy groundcover, to Z4b. 5 seed \$4

Ephedra nevadensis "Tu Tut" "Desert Jointfir" CA Native

Weird subshrub with stems 1–4' tall. Yellowish fruit. Native to dry rocky areas of the southwestern USA, up to 6,000'+. Fossil records show that it has been used by people since prehistory. Many indigenous tribes utilize it as a blood purifier and refreshing, mildly stimulating tonic tea. Seeds ground and eaten. Possibly contains pseudoephedrine. Z6a Seed packet \$4 / Plant 1+ years old \$11.50

Ephedra sinica "Ma Huang" "Zhegergen"

Small shrub to 1.5' tall. Red fleshy edible fruit. Native to dry, rocky mountain slopes of China and Mongolia, up to 5,000'. The fruits are an important food in Mongolia, being super rich in protein, fatty acids, vitamins and minerals. Also known as "Cao Ma Huang", the herb has been widely used in Chinese medicine for 5,000 years to treat fever, nasal congestion, and asthma. Contains significant amounts of ephedrine alkaloids. Because of misuse of purified ephedrine in diet and stimulant/aphrodisiac products, the FDA has severely restricted products containing ephedrine. This has unfortunately led to scarcity of the whole herb, which, unlike using the isolated ephedrine, rarely gives rise to side-effects. Fortunately it is still acceptable to grow the plant and benefit from its medicinal properties from the safety of your garden. Z5b Seed packet \$4

Ephedra viridis “Kiwikiw” “Mormon Tea” CA Native

Stems 1–3' tall. Yellow edible fruit. Native to the southwestern USA, up to 7,500'. Used by numerous tribes as a tea for kidney and blood cleansing, colds, headache, and an esteemed general tonic. Popular among Mormon settlers. Contains pseudophedrine. The Chumash used it to induce “sacred dreams”. The seeds were roasted and ground into a meal. Grow like other dryland species. Z5b Seed packet \$4 / Plant 1+ years old \$11.50

Erythrina flabelliformis ‘Skeleton Canyon’ “Chilicote” “Colorin”

Fabaceae. Pachycaul tree 10–30'+. Smooth grey bark with striations of white and green. Deciduous trifoliate leaves and spined stems. Many flowered racemes of brilliant bright red flowers in the Spring. Red to orange or yellow seeds. Restricted areas of southern Arizona, new Mexico and remnant dry forest throughout northern Mexico and Baja. Seed from Skeleton Canyon, Hidalgo Co., NM. The seeds are often used in jewelry, though they are quite toxic. Small amounts are used medicinally. There is speculation that the seeds may have once been used as a psychoactive additive to maize beers by the Chiricahua Apache. Z9b/10a 4–6" plant 2–3 years old \$14.50

Erythrina flabelliformis ‘Santa Rita Mountains’ Seed from the biodiverse Santa Rita Mountains, Arizona. 4–6" plant 2–3 years old \$14.50

Erythrina herbacea “Cherokee Bean” “Coral Bean”

Herbaceous caudiciform shrub to 4' though reported up to 16' in frost free areas. Tripartate leaves with arrowhead-shaped leaflets. Large spires of dark red tubular flowers. Bean-like red seeds. Native to the southeastern USA and northeastern Mexico. The plant is rich in toxic alkaloids and was used medicinally throughout its range for everything from rheumatism to digestive aid and general tonic to rat and fish poison. In some parts of Mexico the flowers are added to soups and said to be mildly narcotic. Easy to grow, drought tolerant. Z7b 4–6" plant 2–3 years old \$15.50

Erythrina humeana

Prickly shrub to 12' or so. Trifoliate leaves and racemes of scarlet flowers. Native to the dry scrub forest of coastal South Africa. The bark is used for wound healing and arthritis. Knick and soak seeds to sprout. Z10a 5 seed \$3.50

Erythrina lysistemon “Coral Tree” “Umsinsi”

Pretty South African tree up to 30' tall with thick thorny branches. Bright scarlet flowers appear in spring before the leaves. Cylindrical pods and shiny red seeds with a black spot. The bark is used topically to treat arthritis, sores and wounds. The seeds are popular in jewelry. Contains toxic alkaloids. Z10a 5 seed \$3.50

***Euphorbia* sp. BK14516.11**

Euphorbiaceae. Slender upright red stems to 12", small oval leaves, terminal clusters of tiny green and yellow-white flowers. We observed plants in habitat to form geophytic, rounded, bronze-red caudexes to 6"+ across, but have yet to see these in captivity. Exposed rocky slopes, dry forest, Apurimac, Peru, 7800'. May have medicinal uses like the similar *E. huanchahana*. Succulent care. Z10a? 10 seed \$4.50

Fockea edulis “Bergkambroo”

Asclepiadaceae. Develops a large warty caudex/tuber up to a foot in diameter and several feet long. A mass of twining stems arise from the top of the caudex. Small unusual star like flowers. This oddity has a long history as an important food and water source for the tribal people of South Africa and has contributed over the ages to human survival in the Kalahari desert. The caudex is eaten fresh, baked like sweet potato and made into a chunky jam. Easily grown and a favorite among caudiciphiles. When growing for food, transplant to 5 or 10 gallon pots after the first year and harvest the root in the 3rd or 4th year. Tolerant of mild frost if well mulched. Z9b 10 seed \$4 / Plant 1"+ caudex 3 years old \$12.50 *Inquire for larger specimens*

Geissorhiza corrugata

Iridaceae. Dwarf bulb with very cute, blue-green, spirally curled slender leaves to 2"+. Bright yellow crocus-like flowers. Shale slopes, Roggeveld Center, South Africa. Winter grower, give it gritty soil, dry summer rest. Bright sun for maximum leaf curliness! Z8a Seed packet \$3.50
Plant/bulb 4 years old \$9.50 or 3 for \$21

Gibbeaum dispar “S’Keng Keng” “Dumpiesnuif”

Aizoaceae. Small clump forming ice plant. Pairs of fat succulent fuzzy pink gray leaves separated by a deep fissure. Violet colored flowers. One of many medicinal South African mesembs. The dried pulverized plant is chewed, snuffed or smoked. Thought to contain mesembrine alkaloids like *Scetetium*. Easily cultivated, but slow. Winter grower. Z9a Seed packet \$4

Haworthia limifolia “Umathithibala” “Fairly Washboard”

Aloaceae or Liliaceae. Clustering rosettes to 6" with as many as 20 pointed leaves covered in small transverse ridges. Thin stalks bearing small white flowers. Native to the northern Zululand and the former Transvaal, South Africa. Used by the Zulu to treat gastro-intestinal problems, but more commonly planted as a charm on the roofs of homes for protection against evil, lightning and thunder. Such widespread use has contributed to the near extinction of wild plants. Easily grown, regular succulent culture. The flowers attract hummingbirds. Great as a houseplant, even in areas of low light. Z9b 2"+ plant \$6.50

Haworthia limifolia* v. *umbomboensis

Clustering succulent rosettes to 6"+. Pointed, triangular leaves, lime-green with pinkish hues in bright light. Small white flowers on slender stalks. Umbombo Mountains, Swaziland, southern Africa. Z9a/b 2"+ plant \$6.75

***Hechtia isthmusiana*?**

Bromeliaceae. Relatively small rosettes of stiff, recurved, green leaves that turn a deep rust color in bright light. Slight silver striations on the underside of the leaves. Short marginal spines. A new species from Nizanda, Oaxaca, Mexico. Should have white flowers if ID is correct, if flowers are reddish it may be *H. macdougalii*. Grow like *Puya*. Z10a? 3–4"+ plant 3+ years old \$9.50

***Hechtia lepidophylla*?** “Mescalito”

Silvery clustering rosettes of slender recurved leaves with toothed margins. White flowers. If I.D. is correct this is a newly described species from south of Pena Blanca, Queretaro, Mexico. Prefers a hot, sunny location. Z10a 3–4" plant 3+ years old \$8.50

***Hechtia montana* BK101105.4** “Mescalito”

Dark green clustering rosettes with slender toothed leaves. Flower stalks to 4' with white flowers. Forms large colonies on the steep granite cliffsides in the canyons of Baja’s Cape Mountains, 3,000–5,000'. Z9a/b 3–5"+ plant 5+ years old \$9.50

Hechtia perotensis?

Forms a colony of compact 12"+ rosettes. The slender silver leaves are rigid, erect or recurved and thorned along the margins. Flower stalk to 5' with greenish yellow blossoms. Recently described from dry rocky slopes of Puebla and Veracruz, Mexico up to 8000'. Z9a/b?

3–4"+ plant 3+ years old \$8.50

***Hechtia* sp. 'Miahuatlan'**

Rosettes of thick, stiff, dark green leaves dusted with tiny silver scales. Large marginal thorns. Seed from Miahuatlan, Oaxaca, Mexico. We'll have to until the plants bloom to get a clear ID. Sun, heat and drought hardy. Z9b/10a?

3–4"+ plant 3+ years old \$8.50

***Hechtia* sp. 'Rio Zapotitlan'**

Rosettes of long, recurved, deep green leaves with silver flecking. Large, curved, reddish marginal spines. Seed from Puebla, Mexico. An attractive unidentified plant—possibly a new species. Z9b/10a?

3–4"+ plant 3+ years old \$8.50 or 3 for \$20

***Hoodia gordonii* "Bobbejaanghap" "Bitterghap"**

Alsecepiadaceae. Leafless gray succulent stems up to several feet tall that branch from the base of the plant in candelabra like fashion. The stems are covered in conical tubercles tipped with stiff, sharp thorns. Large dish like purple-brown flowers bloom along the sides of the stem. The flowers have a stench like carrion to attract the plants' main pollinators – flies. This unusual milkweed, that superficially resembles a cactus, is native to arid regions of south west Africa. The bitter stems are eaten fresh as a food, as a unique appetite suppressant (scores of *Hoodia* "diet" products are now being marketed) and to treat ulcers and other stomach problems. The plant is said to have an interesting licorice like aftertaste which apparently gives tobacco smoke a pleasant flavor. Needs a soil mix of at least 60% pumice and strong, bright light. Wild populations are now threatened due to overharvesting for the herbal market. Z10a *inquire*

***Ibervillea sonora* BK101109.1**

Cucurbitaceae. Forms a large, flat, grey caudex to several feet across. Tendrilled vine with deep cut leaves, yellow flowers and egg size red fruit. Growing in the shade of *Bursera microphylla*, Cape of Baja. A caudiciphile's delight! Extremely drought hardy. Z10a 5 seed \$4

Ipomoea albivenea

Convolvulaceae. Attractive South African morning glory that develops a fat gray pachycaul trunk. Thick gray vines arise from the top of the trunk bearing felty silver green heart shaped leaves and 3–4" white, night blooming flowers with pale pink or yellow throats. Native to Kwazulu-Natal and the old Transvaal provinces. Easy to sprout, just nick and soak the seed. Needs a large deep container for the thick tuberous roots and the soil mix should have excellent drainage. The vines can be trellised and tend to be perennial if kept above 50° F. Z10a–b 5 seed \$3.50

***Ipomoea capillacea* RM51**

Miniature morning glory with a small perennial caudiciform root. Annual vines to 1–2', very slender palmate leaves—quite unusual. Charming 1/3"+ pink flowers. Rare species new to cultivation, seed originally collected northwest of Pima, Durango, Mexico. A wonderful diminutive plant for caudiciform collectors. Succulent type soil and a dry winter rest. Z10a? 5 seed \$5 *inquire for plants*

***Ipomoea leptophylla* "Man of the Earth"**

Bushy trailing stems to 4', lanceolate leaves and 3" magenta flowers. Massive tuberous root, up to the size of a man. Native to the southwestern USA. The roots were roasted and eaten as a famine food. Seed from Colorado populations. Direct sow or use a deep pot. Z5b 5 seed \$4

Ipomoea platense

Uncommon morning glory that forms a large twisted and branched caudex to 10 pounds. Vigorous purple green vines, palmate leaves and a profusion of 3" lavender flowers. Endemic to the Rio Plato region of Argentina, Paraguay and Uruguay. These plants thrive in warm conditions, like regular water, grow fast and need a large pot to accommodate their caudex. The vine can be trellised and is usually perennial if kept from cold. Plants can be repotted every few years and the roots raised some to show off the beautiful braided caudex. Does well as a houseplant but needs regular pruning. Z10a 5 seed \$3.50 *inquire for plants*

***Ipomoea pubescens* BK08518.9**

Perennial caudiciform roots, annual vine to 6'+. Furry trilobed leaves. Shiny deep blue morning glory blossoms. Our collection, Pisac, Cusco, Peru, near 10,000'. Sparsely distributed from Mexico to Argentina. To our knowledge this is the first introduction of genetics from the Andes into cultivation. Z9b? 5 seed \$4.50 / Plant 2–3 years old \$18.50

For non-succulent *Ipomoea* –see the Andean section of the catalog.

***Lycium berlandieri* "Desert Wolfberry" "Desert Goji"**

Solanaceae. Lightly thorned shrub 2–5', arching branches, simple gray-green succulent leaves. Small lavender flowers and 1/3" bright-red round berries. We collected seed south of Tucson, Arizona years ago and a plant has since taken over a part of our greenhouse. Valued by southwest natives as food and medicine. Edible leaves and delicious berries, one of the few palatable species of *Lycium* from the region. Likely similar in nutritive and medicinal properties to Asian *L. barbarum*. Extremely drought tolerant. Z9b 5 seed \$3.50

For other *Lycium* –see the Andean/Chilean and Medicinals & Edibles sections of the catalog.

Massonia depressa

Hyacinthaceae. From a bulb grow 2 ground hugging rounded leaves. Cream colored, shavingbrush-like flower with yellow stamens from the center of the plant. This bizarre geophyte is reported to be edible. Sun and sandy soil. Cold treatment for best germination. Z8a 10 seed \$3.50 / Plant/bulb 3–4 years old \$9.50

***Mesembryanthemum crystallinum* "Ice Plant"**

Aizoaceae. Low growing annual to perennial succulent with large fleshy leaves. The stems and leaves are covered in glistening water vesicles giving the entire plant a crystalline appearance. Shiny yellow-white flowers. The leaves are edible fresh or cooked with a slightly salty spinach-flavor. Popular as a showy garnish among gourmet chefs. The crushed leaves are demulcent, the entire plant diuretic. Drought and saline tolerant. The plants ability to accumulate salt makes it useful for bioremediation. Nonetheless there is dubious paranoia around its "invasive" nature. Seed cannot be sent to CA addresses except for identification purposes. Z10a Seed packet \$3.50

Mestokloma tuberosum “Vybossie”

Aizoaceae. Small pachycaul shrub to 3' whose huge thickened roots have red-gold peeling bark. Densely branched stems clothed in small succulent leaves. Small copper-orange flowers. South Africa. A famine food for livestock. Desired by collectors, often bonsaid with the beautiful roots exposed. Z8b?

Seed packet \$4 / 8–14"+ plant 3+ years old \$16.50

Montia parvifolia

Portulacaceae. 1–3" rosettes of small paddle-shaped succulent leaves. Straight flowering stems to 12" bearing 1/2" white-pink flowers. Small plantlets grow along the flowering stems and eventually drop off and root wherever they land. The edible leaves have an interesting taste and were once used as a relish. Quite showy and easy, shade to part sun. Self propagates and is very drought tolerant. From seed originally collected on the north side of mossy rocks along the north fork of the Trinity River, Trinity Co. CA. Z8a

Plant \$6.50

***Nolana weberbauerum* BK151007.1**

Nolanaceae. Semi-succulent sprawling groundcover to 6" high. Produces hundreds of small morning-glory like blue flowers. Endangered endemic of the coast and inland Lomas around Lima, Peru. Seed can be an erratic germinator. Z10a

Seed packet \$4

Nolina durangensis “Durango Bear Grass”

Agavaceae. Very rare *Yucca* relative with a thickened caudex-like base and several trunks topped with long, slender stiff leaves. Inflorescence with cream colored flowers. Upper elevation Sierra Madre, Durango, Mexico. A unique and wonderful species. Drought and cold hardy. Z8a

Plant 5+ years old \$11.50 or 3 for \$26

Nolina hibernica “Bear Grass Tree”

Robust arborescent species 6–20' tall. Rounded terminal rosette of stiff bright green leaves tipped with twisted rugged fibers. Inflorescence 4–8' high with white flowers. Native to the high mountain pine forests of Nuevo Leon and Tamaulipas, Mexico, 8,000–10,500'+. This fantastic cold hardy plant is rare in captivity and will make an excellent landscape specimen with age. Z8a

Plant 5+ years old \$14.50 or 2 for \$25

Nolina parryi* ssp. *wolfii “Giant Beargrass”

Slow growing species 6–12'+ tall. Very thick trunks crowned with globose rosettes of long stiff leaves. Massive feathery inflorescence to 8' with thousands of cream colored flowers, pleasantly fragrant. A California endemic, seed collected near 4000', San Bernadino Co. Makes a bold landscape specimen. Extremely drought hardy. Z8a

Plant 4 years old \$9.50

Ochagavia elegans “Ajo Dulcie”

Bromeliaceae. Handsome small rosettes of green to silvery pointed leaves. Compact cluster of dark pink flowers in the center of the rosette followed by sweet edible fruit that looks like a garlic bulb, hence the local name “ajo dulce”. This pineapple relative is endemic solely to Robinson Crusoe Island. Here it forms large dense colonies on rocks and sheer cliff faces. New to cultivation, sprout seed like cacti. An awesome rarity that will make a unique edible ornamental for the adventurous grower. Z8b/9a?

inquire for plants

Operculicarya decaryi “Madagascar Elephant Tree”

Anacardiaceae. Dioecious pachycaul-caudiciform tree to 20' with a warty swollen trunk and zig-zag branches. Lovely pinnate leaves with tiny shiny leaflets that turn purple-red in sun or cold. Drought deciduous. Tiny reddish flowers. Toliara, Madagascar. Ideal for bonsai, the roots can be lifted for added aesthetics. Succulent culture, bright light, well draining soil. Mature plants can survive mild frost. Z9b

10 seed \$4

6–12+ treelet 3+ years old \$16.50

Oxalis gigantea “Churco”

Oxalidaceae. Succulent shrub with clusters of upright cylindrical stems 2–5'+ high. The stems are densely clothed in drought deciduous shamrock-like leaves. Yellow flowers are borne in mass along the stems. Tuberous roots need gritty soil. Coastal deserts of northern Chile. In most active growth winter and spring. One of the largest and coolest looking *Oxalis* species. Highly drought tolerant. Z9b/10a

5 seed \$4 *Inquire for plants*

Oxalis nelsonii “Mexican Mountain Sorrel”

Bulbous perennial with annual clumps of bright green shamrock leaves. Rose pink flowers. Mountains of southern Mexico to Honduras. Z9a

Plant 4+ years old \$10.50

Oxalis peduncularis

Clusters of upright succulent stems 4–16"+ tall. Blue-green, swollen succulent leaf petioles tipped with small clover-like leaves that drop in dry conditions. The plant takes on vibrant reddish hues in strong light. Yellow flowers. Native to the warm interAndean valleys of Peru, often growing as a lithophyte on old Incan walls. Can grow quite lush and tall in moist areas. Though non-tuberous it is part of the *Oxalis tuberosa* alliance, it may have contributed to the development of the cultivated “Oca” and could be potentially useful for future breeding efforts with the crop. Tolerant of hot, dry conditions - a true succulent xerophyte. Z9a/b?

Plant 2+ years old \$9.50 or 3 for \$22

Oxalis urubambensis “Oca-oca”

A plant to inspire Dr. Seuss. Finger to pencil-thick, wavy, succulent stems 18–30"+ high topped with rounded heads of lightly pubescent, lime-green to blue-green, clover-like leaves on long petioles. Clusters of yellow flowers on slender stalks held above the foliage. Native to rocky slopes of the interAndean valleys of Cusco, Peru. Though non-tuberous, it may be useful for Oca breeding. Drought hardy. Z9b?

4–8"+ plant 2 years old \$10.50 or 2 for \$18

***Oxalis* sp. BK14514.9**

Erect, slender, succulent, red stems to 24"+ high. Clover like leaves on long petioles. Panicles with dozens of bright yellow blossoms, very sweetly scented! Cloudforest, Choquequirao, Cusco, Peru, 10,000'. Attractive fruity-scented species, resembles *O. tuberosa*. Good candidate for oca breeding. Z9a/b?

10 seed \$4 (limited)

For edible succulent *Oxalis* –see our Andean Tuber section

Pachypodium brevicaulis

Apocynaceae. Forms a low growing lumpy caudex, like a sack of potatoes or small boulder. Small green leaves and yellow flowers. Madagascar. Wonderfully bizarre, the most highly desired species in this fascinating genus. Bright light, porous soil, and a dry winter rest. Z10b

10 seed \$5

Pelargonium sidoides “Umckalooba”

Geranaceae. Perennial to 6" with round, silky, downy, silver leaves and small purple-black flowers. Tuberous roots. South Africa. The root is a powerful antibacterial, antiviral, and immunomodulator. It is used to treat acute and chronic sinusitis, bronchitis, ear infections and tuberculosis. Commercially cultivated in South Africa and quickly gaining merit in Europe and the USA as a potent, effective medicinal. Easy and highly ornamental. Rooted cuts. Z8a

5 seed \$3.50 *inquire for plants*

***Pellaea ovata* BK14513.5**

Polypodiaceae. Very attractive xerophytic fern. Bipinnate leaves 4–8"+ long, yellow-orange to gray wiry stems. Ovate to triangular leaflets 1/4–1/2"+, deep green with lime green centers. Growing amongst boulders, dry forest understory above the Apurimac, 6600'. Other species of *Pellaea* are used as stimulants. Should be perfectly adaptable to succulent culture. Z9a/b? Spore packet \$4.50 / Plant 5+ years old \$17.50 (limited)

***Pellaea ternifolia* BK101106.3** “Pellote”

Xerophytic rock fern with dark brown hairy rhizomes. Leaves with black wiry stems and gray-blue ternate leaflets. Mountains of southern Baja. Oddly, local ranchers call this attractive fern “peyote” and told us that a tea of the rhizome is like “coffee”. Easy to grow, treat like a succulent. In periods of prolonged drought the leaves die off but will resprout from the rhizome when watered. Z9? Spore packet \$4.50 *inquire for plants*

Genus *Peperomia*

Piperaceae. Huge tropical and subtropical genus of well over 1000 species, most occur in Central and South America. Close kin to such notables as black pepper and kava-kava. Typically small plants, many of which are succulent, with a shocking and joyous diversity of morphological expression. With a few exceptions, the resplendent beauty of these plants is in their exceptional gem-like leaf forms rather than their slender flower spikes. *Peperomia* are vital to Andean ethnomedicine and ceremony. Their wondrous aromas and flavors when crushed or chewed, ethereal combinations of balsam, lemon, mint and saffrole, are a revelation. Used traditionally for wound healing, digestive health, as painkillers, tranquilizers, condiments, to freshen breath, to make chicha and to ceremonially “cleanse and flower subtle energies”. Their complex essential oils and other compounds have passed the approval of those high priests of modern culture; the white lab coated scientist and shown significant antibiotic, antiparasitic and wound healing actions in controlled laboratory studies. Other than a few *Peperomia* popular as common houseplants, most species and their beneficial nature are unknown outside their native habitats. Thanks to the encouragement of police colonel/plastic surgeon/linguist/ethnobotanist and *Peperomia* expert, Guillermo Pino, we have become inspired by these marvelous plants. We are propagating an increasing number which will be available for distribution in the future. All are very easy to root from cuttings. See the Rare Plant List for additional species.

***Peperomia andina* “Munllu munllu” “Papa Madre”**

Charming species, small discoid perennial tuber/caudex. 1/2" waxy peltate round leaves with red-purple undersides. Whitish flower spikes. North Peru up to 12,000'. The tuber is used topically for wound healing and inflammation, macerated in liquid it is drunk as a tranquilizer. Z8/9?

10 seed \$5 *inquire for plants*

Peperomia asperula* f. *compacta

Creeping succulent, compact rosettes 1–3" high. Dark green to rusty grey-brown leaves, sides minutely asperous, the slender upper surface windowed. Yellow to reddish flower spikes. Dry rocky habitat, Rio Sana Valley, La Libertad, Peru. Another jewel-like species with a balsamy scent. Z9b

Seed packet \$4 / Unrooted cutting \$15.50

Peperomia berteroa

Upright succulent stems 12–20"+. Dark green, shiny, spatulate leaves to 3"+. Branched lime-green flower spikes. Extremely rare endemic from the forests of Robinson Crusoe and Alejandro Selkirk Islands, Juan Fernandez Archipelago, Chile. Less than 700 plants are thought to remain. Has a good flavor and mild balsam aroma. Contains flavonoids. Prefers bright, filtered light and semi-humid conditions. Z9b? Plant/cutting \$20.50

Peperomia boivini

A handsome trailing species with stems to over 12" long. Whorls of thick, coin-like, succulent, green leaves. Large lime colored flower spikes. Rare endemic of the Comoros Islands, northwest of Madagascar. Great as a houseplant or in hanging baskets. Unrooted cuttings. Z10a Unrooted cutting \$12.50

***Peperomia congona* ‘Canary Islands’ “Congona” “Canelo”**

Relatively large species, upright stems 12–24"+ tall with whorls of succulent leaves. Known only as a cultivar, it has never been found in the wild. Primarily grown in home gardens and esteemed for its medicinal properties from Columbia to Argentina. The Spanish Missionary Bernabe Cobo mentioned the value of the plant in the 1600s. In 1778 Hipolito Ruiz recorded it was cultivated throughout Lima, Peru for its fragrance. The whole plant is used topically for wound healing. Crushed or chewed it has a mildly sweet cinnamon-citrus scent and flavor. Leaves are chewed daily to freshen breath and keep teeth healthy. Leaf infusion is used as a sedative and painkiller. The Kallawaya, famous travelling herbalists of Bolivia, recommend it for stomach complaints and press the juice from a leaf heated with a match for earache and eye troubles. Curanderos of northern Peru make use of the plant for heart conditions, anxiety and shamanically to “ease emotional pain and forget bad relationships.” The Chachapoyas people regularly enjoy a tea of the plant yet caution that drinking too much “might just cause you to lose your memory...” In Loja, Ecuador it is used to flavor a horchata drink. The Spanish introduced it to the Canary Islands at some point, it is currently cultivated there and known as “canelo”, being used as a spice and condiment. Since the 1950s it was considered a synonym of *P. inaequalifolia*, a mistake that has only recently been corrected. The 2 species are distinct and now recognized as such. Despite being a domesticate with a long history of use, this plant has not been well studied. Easily grown in a sunny window. This is a clone of the plant introduced to the Canary Islands. Z9b Unrooted cutting \$16.50

***Peperomia congona* ‘GP’ “Congona”**

A preferred clone of this mysterious ancient cultivar. G. Pino’s collection from the medicinal plant markets of Peru. See above for description. Z9b? Unrooted cutting \$17.50

***Peperomia dolabriformis* v. *grandis* GP1492**

This is the large variety of species with thick stems growing to 1.5–2' tall, the yellowish flower panicles reaching another 1.5'+ high. The dull green succulent leaves are petioled and longer with prominent lateral nerves compared to other varieties. Pino seed collection near 6000', Amazonas Dept, northern Peru. Z10a *inquire*

***Peperomia dolabriformis* v. *multicaulis* GP1909** “Congona”

Beautiful, upright, heavily branching succulent species 1–2' tall. Thick handsome leaves, pleasantly aromatic when crushed. Yellow flower spikes. Seed of this new varietal collected by G. Pino in Cajamarca Dept., San Marcos Prov., Peru. Road from San Marcos to Cajabamba, near La Grama, 7100'. Used as a topical painkiller and anti-inflammatory. Z10a *inquire*

Peperomia galapagensis “Galapagos Congona”

Bright green succulent 3–6" tall. Creeping to upright multibranching stems. Whorls of 4+ small oval leaves at each internode. Green flower spikes. In bright light the plant will take on reddish hues. Rare endemic of Darwin’s wonderland, the Galapagos Islands. First fondled by the great man and pressed into herbarium sheets in 1835. Grows on rocks and trees, often in moist shaded areas above 300'. Appears to have evolved from *P. inaequalifolia* of the Andes and the flesh of the plant has a similar superb balsam-citrus scent/flavor. Medicinal like close kin. Z9b/10a Seed packet \$6

***Peperomia galioides* BK09423.2** “Congona Macho”

Sprawling clusters of upright green succulent stems 10–15" tall. Whorls of emerald succulent leaves, yellow flower spikes. Growing on steep slopes with *Trichocereus peruvianus*, *Echeveria chilclensis* v. *backbergii* and *Carica candicans*, below Huariquina, Lima Dept., Peru, 7,600'. Said to be the most important medicinal *Peperomia* by Pino, used for “everything”- an effective painkiller, compress for wound healing, calming sedative, even for hair loss! The plant contains quinones, sesquiterpenes and over 70 other compounds in the essential oil including limonene, eugenol, safrole, etc. Extracts have shown to be effective against staph infection and the deadly chagas and leishmaniasis parasites. Has a delicious balsam with a hint of lemon aroma when crushed. We love to chew this plant! Z9b *inquire for plants*

***Peperomia galioides* BK14512.8** “Congona Macho”

Large clusters of upright, very thick, green succulent stems 6–18"+ tall. Whorls of succulent leaves with windowed upper surface, yellow flower spikes. Plants in full sun turning a burnt orange color. Near Capuliyoc Pass, Peru, 9800'. A very attractive form of this important aromatic medicinal. Z9b

Unrooted cutting \$16.50

***Peperomia galioides* v. *glauca*? BK10509.9**

Clusters of succulent stems to 6". Whorls of small glaucous grey-green leaves. Yellow flower spikes. Seed collected from plants growing on Incan ruins, Inkallajta, Cochabamba, Bolivia, 10,000'. When crushed it has a superb balsam/citrus/mint scent and flavor, one of the best. Cuts from 2 clones. Z9b

Unrooted cutting \$17.50

***Peperomia* aff. *galioides* BK09425.1** “Congona”

The mother plants looked to be *P. galioides*, yet these seedlings seem distinct. Likely a natural hybrid with *P. lanuginosa*. Red or green stems, alternate succulent leaves, yellow flower spikes. Great aroma and flavor when crushed. Seed collected from rock outcrops on the steep slopes above the acequia just north of the town Pisac, Cusco Dept., Peru, near 10,000'. Growing with *Echeveria* sp., *Pilea serpyllacea*, *Oxalis* sp., *Tillandsia* sp. Good houseplant. Z9b

Seed packet \$4.50

***Peperomia hartwegiana* BK08521.6** “Jalcacongona”

Jewel like succulent with whorled orbicular leaves with a windowed upper surface. Just 2–6" tall, grows creeping along rocks and cliffs. This seed is from a very attractive population with red leaves and purple/red flower spikes, Ollantaytambo, Cusco Dept., Peru, 9300'. Used for eye/ear infections, a tea for lung and kidneys issues. Curanderos of northern Peru consider the plant protective. Reportedly utilized during mesada ceremonies for ‘floricimiento’- “to cleanse and flower the subtle energies of the body and spirit so that the patients dormant potentials can blossom like the nocturnal flowers of the San Pedro cactus”. Seed can be slow to germinate. Z9b?

Seed packet \$5 (limited)

Unrooted cutting \$17.50

***Peperomia inaequalifolia* BK09512.5** “Congonita”

Small upright plants to 3–5", spreading by rhizomes. Reddish stems and whorls of small pointed succulent leaves, lime to yellow green in color. Has an energizing and refreshing balsam-lemon scent when crushed, a personal favorite. Many medicinal uses like *P. galioides*, in northern Peru it is smoked or added to food for forgetting emotional pain and strengthening the heart. Growing amongst boulders and *Polylepis weberbaueri* trees along with *Peperomia hartwegiana*, *Tillandsia* sp., and *Berberis* sp., Ancash Dept., Peru, 13,000'. Will regrow from rhizomes after frost. Z9a or below

Unrooted cutting \$16.50

***Peperomia inaequalifolia* ‘Lachay’** “Congonita”

Small upright plants to 4–6". Whorls of small rounded succulent leaves, lime to yellow green in color. Has an energizing and refreshing balsam-lemon scent when crushed. This is the small wild form of the cultivated species. This form comes to us from G. Pino and was originally collected in the foothills of the Andes, a unique mist fed ecosystem known as Lomas de Lachay, Lima Dept., Peru. Differs a little from our Ancash collection. Z9b

3–5" plant 4+ years old \$19.50 (limited)

***Peperomia lanuginosa*? BK09428.3** “Pukacongona”

Upright to sprawling succulent species with whorls of 4 soft elliptic leaves with reddish undersides, red stems and yellow flower spikes. Excellent balsam scent. Growing in the shade of a large rock at the Incan ruins of Pumamarca, Cusco Dept., Peru, 12,000'. Z9b or below *inquire*

***Peperomia* aff. *lanuginosa* BK14513.7**

1–2"+ tall succulent. Densely arranged, rounded, slightly furry leaves, dark green to green-blue with lighter veination and red backsides. Yellow inflorescence to 6–10". Growing on steep embankments and moss covered rocks in the shade of shrubs, dry forest near Santa Rosa, Peru, 6800'. Overall more compact and diminutive than *P. lanuginosa*. Pino thinks it is a distinct species. Z9b/10a

Seed packet \$5

***Peperomia microphylla* BK14513.22**

Clusters of slender stems 1–3"+ tall. Densely packed, small, deep green succulent leaves, transparent on the upper surface. Short, yellow-green flower spikes. Growing in moss on the trunk of a *Cedrela angustifolia* tree, cloud forest near Choquequirao, Cusco, Peru, 9500'. The plant has a delightful mint/ balsam flavor and aroma. This lovely little species is completely new to cultivation. Z9b?

10 seed \$5 (limited)

Peperomia monticola

A perennial caudiciform tuber to 2" with annual, upright, rounded peltate leaves with a waxy sheen White flower spikes. Native to the mountains of southern Mexico. Contains aromatic oils like much of its kin. Does well as a houseplant. One of the easier species from seed. Z9a/b

Seed packet \$5

***Peperomia naviculaefolia* GP1622**

A compact, creeping succulent species 2–5" tall. Rosettes of beautiful dark green leaves with bronze to pinkish highlights. The upper surface of the leaves is a clear window, the sides have a rough texture. Grows on rocks near 10,000', Junin Dept, Peru. Nice aromatics when crushed. We find this rare species to be quite esthetically pleasing, a real gem. Prefers a gritty mineral soil and bright light. Z9b

Unrooted cutting \$ 16.50

***Peperomia* aff. *naviculaefolia* BK09508.5**

Small succulent plant to 2–5". Rosettes of chubby, “toad-skin” leaves, green to pastel pink, clear green windows on the upper surface. Strong balsamy scent. Growing with *Sedum*, *Peperomia galioides*, and *Matucana* sp., above the ancient site of Chavin de Huantar, Ancash, Peru, 11,000'. G. Pino thinks this may an unusual form of *P. naviculaefolia*, never reported from Ancash before, or possibly a totally new species. First introduction. Z9b?

inquire

***Peperomia nivalis* v. *compacta* GP909**

Small creeping species 2–4" tall. Lime-green columnar stems covered in densely arranged tiny succulent leaves with windowed upper surfaces. Relatively recent discovery from San Marcos, Cajamarca, Peru, near 10,000'. Highly desired because it is one of the more exceptional looking *Peperomia*. Strong balsamy scent when crushed. Prefers a very bright location and well draining soil. Rare offering of seed grown plants. Z9a/b

Seed packet \$5

2–3"+ plant 3+ years old \$22.50

***Peperomia nivalis* fma. *diminuta* ‘Huacariz’**

Tiny creeping succulent 1–2" high, lime green leaves with a windowed upper surface. Marvelous unusual dwarf form from Huacariz, north Peru. Z9b?
Seed packet \$4.50

***Peperomia pellucida* “Lingua de Sapo” “Shiny Bush” “Pansit-pansitan”**

Annual succulent 5–15"+ tall, shiny heart shaped leaves, yellow-green flower spikes. Found in tropical and subtropical regions of the Americas, Asia, and Oceania. The entire plant has an attractive aromatic scent when crushed. A highly versatile panacea, it is used for wound healing, skin & eye problems, headaches, colds & coughs, fevers, sore throat, rheumatism, upset stomach, as a topical pain killer, diuretic and for kidney and prostate problems. In Brazil it is used to lower cholesterol. Studies in India suggest that extracts of the plant have psychoactive diazepam-like effects. Pharmacological research has shown the plant to have analgesic, antifungal, anticancer and antiinflammatory properties and broad spectrum antibiotic actions. The leaves are also very tasty and are popular in salads and stir-fries in Asia. Surface sow seed. Prefers warmth and filtered sun. Reseeds. Z10a
Seed packet \$4

***Peperomia peruviana* BK10423.2 “Puku puku” “Inti-killa papa”**

Small round perennial tubers which produce annual peltate circular leaves to 1" diameter and yellow inflorescences. The balsamy scent of the crushed leaves is considered calming and they are chewed for oral hygiene. Growing in Incan walls just above the town of Pisac, Cusco, Peru, 10,000'. Good germination after 8 weeks warm. Z8?
Seed packet \$5 (*inquire for plants*)

***Peperomia rotundata* BK09428.5 “Congona de Monte”**

Clambering succulent species 12–20"+ with arching reddish stems, dark green furrowed leaves, and red-purple flower spikes. Growing amongst boulders and ferns on the descent towards the Patacancha Valley, Cusco, Peru, 10,500'. The crushed plant is used for wound healing, the leaves are eaten as a vegetable with a pleasing mild peppery taste. An unusual edible for the garden or windowsill. First introduction. Z9b?
Seed packet \$4.50

***Peperomia* sp. *nova* (aff. *rotundifolia*)**

Trailing plant with slender wiry red stems, small circular succulent leaves 1/4–1" , dark green on top, rusty on the back. Thin red flower spikes. An interesting new undescribed species from Cusco, Peru. Rooted cuttings. Pino thinks it should be hardy below Z9a...
Plant \$11.50

***Peperomia* sp. BK14513.13**

Upright succulent 4–12"+ tall. Reddish stems, each node has whorls of 4 deep green obovate leaves 1–2" long. Yellow-green flower spikes. Mild peppery flavor and scent. Forms dense colonies in the shade of trees. The beginning of cloud forest before Maranapata, Peru, 9500'. Z9b/10a 10 seed \$4.50 (limited)

***Pilea serpyllacea* BK10425.1 “Kaka uvas uvas”**

Urticaceae. 2–5" succulent with densely packed miniature round leaves that turn bright red in sunlight. The backs of the leaves are like a clear window. Grows on exposed rocks throughout the highlands of Cusco. Surely one of the most unique plants in the nettle family. Used as a tea for urinary and kidney health, the small leaves are eaten by children. Seed collected from plants growing on bare rocks, Cusco Dept, Peru, 9,300'. 4–8 weeks warm to germinate. Z9b
Seed packet \$4.50 / 2–4"+ plant 2–3 years old \$12.50 or 2 for \$22

***Pilea* sp. BK08524.15**

Branching plant to about 8" tall with jointed, deep red succulent stems and stingless, nettle-like green leaves with furrowed venation. Yellow-green flowers. An unusual succulent we found growing with a *Peperomia* species in the shade of an *Escallonia* tree on a rock wall edging a rural homestead above Lares, Cusco, Peru, near 11,000'. The leaves and stems seem perfectly edible. Very easy to grow, makes a superb houseplant, sun or part shade. Roots quickly from cuttings. Z9b?
inquire for plants

***Pleiospilos bolusii* “Dumpiesnuif”**

Aizoaceae. Pairs of large succulent gray-green leaves up to 1.5" thick and 3" long. Several large yellow to orange flowers bloom from the center of the plant during Autumn. The flowers have a slight coconut scent. Clusters with age. This unusual plant, which somewhat resembles chunks of granite, is native to the Cape Province of South Africa. Reportedly dried and chewed or snuffed for its inebriating properties. Tolerant of some frost if kept dry. Z9b
Seed packet \$3.50 / 1–2"+ plant 3+ years old \$7.50

Pleiospilos compactus

Large clusters of thick fleshy gray-green leaves. Big lemon yellow flowers. South Africa. Similar properties to *P. bolusii*. Z9b
Seed packet \$3.50

***Pleiospilos nelii* “Split Rock” “Dumpiesnuif”**

Pairs of large round succulent gray-green leaves. Orange flowers bloom from the center of the plants during winter. Commonly known as the “split rock” because of its remarkable likeness to a cracked pebble. South Africa. Thought to have the same properties as *P. bolusii*. Z9b
Seed packet \$3.50 / 1–2"+ plant 3+ years old \$7.50

***Portulaca eruca* B0566**

Portulacaceae. Small creeping succulent with cylindrical stems covered in densely arranged tiny leaves and white hairs. Forms caudex-like roots with age. Relatively large flowers of brilliant magenta. Seed from Sierra Grande, Cordoba, Argentina. Dies back to the roots during cold or drought. A very cute plant for collectors of the unusual. Hardiness untested, Z9a at least.
Seed packet \$4

***Portulaca* sp. BK08521.8**

Small sprawling stems hug the ground. Reddish-green cylindrical leaves and yellow flowers. Twisted caudex like roots. Ollantaytambo, Cusco, Peru. We originally listed this as *Calandrinia*. A cute plant for those who admire miniature succulents. Z9a?
Seed packet \$4

Genus *Puya*

Bromeliaceae. Xerophytic pineapple relatives from Central and South America with swirled rosettes of silver to green, slender, toothed leaves. The 150+ species vary in size from small plants to tree like giants. The stunning flower stalks often bear blossoms of unusual colors; metallic greens, blues and yellows. *Puya* are pollinated by hummingbirds and other nectar drinkers. Spectacled bears (*Tremarctos ornatus*) are known to particularly relish the plants. Rather than choosing dwarfism as most plants do at high altitudes, *Puya* erupt to giant sizes, the largest and loftiest species, *P. raimondii*, reaching nearly 40' tall at elevations of 15,000'! Forests of this strange sentinel of the heavens were once widespread, but its realm is now reduced by man to small scattered populations in the remote high Andes of Peru and Bolivia. *Puya* species are used for their leaf fibers, wound healing qualities and magical purposes. Around Cusco, Peru the flowers stalks are burned to make “llipta” for coca chewing. Easy to grow, sprout seed like cacti. Great landscape plants, can be grown as a living fence. Extremely drought hardy, many species are tolerant of cold and high rainfall.

Puya assurgens

Dense rosettes of silver green leaves. Branched flower stalk with bright green flowers that become dark purple when drying. Dry rocky areas with *Trichocereus pasacana*, near 6500', Yala, Jujuy, Argentina. Z8b/9a? 3"+ plant 3+ years old \$11.50 or 2 for \$18.50

Puya berteroniana "Chawal"

Forms large rosettes of long, narrow, recurved, gray-green leaves. Huge club like flower stalks up to 9'+ bear a multitude of spectacular dark aquamarine flowers. Central Chilean Andes up to 7,000'. An important food of endangered wild chinchillas. Prefers a bright spot, cooler temperatures. Z8b 2-4"+ plant 2-3 years old \$9.50

Puya castellanosi "Taraca"

Rosettes of slender silver-blue leaves that form dense clusters to several feet across. Upright, pyramidally branched flower stalk bearing flowers of milky blue shades. Found in large colonies on arid rocky slopes between 9-10,000'+, Salta, Argentina. Rare. Fairly cold hardy and drought tolerant. Z8b/9a Seed packet \$4 / 3"+ plant 3+ years old \$12.50

Puya dyckioides "Chaguar"

2-3' rosettes of thin, arching, lightly serrated leaves. Extremely showy bipinnate inflorescence 2-3'+ long with bright pinkish bracts and metallic aquamarine blossoms. Native to southern Bolivia and northern Argentina, between 4300-11,000'+. One of the more friendly and attractive species. Z8a/b 3"+ plant 3+ years old \$9.50 or 2 for \$16

***Puya ferruginea?* BK08519.7**

Silver to green rosettes up to 4' in diameter. Flower stalks to 6-8' tall with loose panicles of deep blue green flowers. Beautiful large multiheaded specimens. Growing all over the arid slopes above the town of Pisac, Cusco Dept., Peru, 11,000'. Z8/9? Seed packet \$4.50 3"+ plant 3-4 years old \$14.50

Puya harmsii

Large clusters of *Agave*-like rosettes of frosted white leaves. Branched inflorescence to 7'+ with velvety black flowers tinged blue. Found on arid slopes up to 8300', north western Argentina. Z8b/9a? 3"+ plant 3+ years old \$12.50

***Puya herzogii* BK10511.5**

Clusters of 2-3' rosettes of grey serrated leaves. Large club like inflorescence to 6-8' tall, flowering bracts covered in a white and grey fuzz, yellow green flowers with bright orange pollen. The impressive flower stalk makes this one of our favorite species. Growing amongst *Puya raimondii*, near Rodeo, Cochabamba Dept., Bolivia, 13,300'. Z7/8? 4-6"+ Plant 5+ years old \$22.50 (limited)

***Puya aff. humilis* BK10509.18**

Mounds to 6-8' across, 3-4' high. Individual rosettes to about 2' wide with slender, serrated, grey leaves. Inflorescence 10-16" tall with reddish to pink bracts, Dozens of incredibly dark blue-black flowers with bright orange pollen. Looks like *P. humilis*, yet was larger than that species is reported. Open north facing rocky slopes between Inkallajta and Monte Puncu, Cochabamba, Bolivia, 10,000'. Z8a/b Seed packet \$4.50 / 3-5"+ Plant 5+ years old \$16.50 or 3 for \$40

Puya lanata "Achupalla"

Rosettes to 3'+ across, dark green leaves with a covering of fine hair-like white scales. Dense cylindrical inflorescence to 10'. Greenish- white flowers. Seed from the western Andes of Cajamarca, north Peru. The source of a gum that was once considered for industrial purposes. Z9b 3"+ plant 3+ years old \$12.50 or 2 for \$22

***Puya mirabilis* BK10506.2**

Single rosette of very slender white leaves to 12"+ diameter. Flower stalk to 3'. Should have yellow green iridescent flowers to beguile hummingbirds. Base of Cerro San Pedro, Cochabamba, Bolivia. Tadeo Haenke wrote in 1795 that *Puya* was used to treat syphilis here. Z9a/b? Seed packet \$4.50 / 3-4"+ Plant 4+ years old \$12.50 or 2 for \$22

Puya medica

Dwarf cushion forming species made up of small rosettes 8-12" wide. Slender serrated silver-green leaves. Small cylindrical flower spike with rose-pink bracts and blue-green flowers. North Peru up to 12,500'. Quite rare. Z8b/9a? 3"+ plant 3+ years old \$12.50 or 2 for \$22

Puya raimondii "Cuncush" "Titanca" "Machukawara"

The giant queen of bromeliads, forms single or occasionally branched trunks with rosettes of slender serrated leaves to 10'+ across. Massive flower stalks like a floral rocket ship with as many as 10,000+ white blooms! Upon flowering these amazing beings have been known to reach nearly 40' tall. 30 to 80 years to blossom, set seed, then die. Forests of this strange sentinel of the heavens were once widespread, but its realm is now reduced by man to small scattered populations in the remote high Andes of Peru and Bolivia at between 12,000-15,500'+. This seed is from robust populations in the Cordillera Blanca of Peru. We have witnessed this spectacular plant in the Cordillera Negra of Peru and Cordillera de Vacas of Bolivia. Standing on the windswept rocky ridges where you can nearly scratch the sky, surrounded by a herd of these imposing vegetal beasts, their leaves clacking and sighing with the wind, the views of a mountain magnificence that stretches countless miles, is a timeless and utterly affecting experience. This plant creates a unique ecosystem around its base where we have observed a high diversity of plant species not seen elsewhere. There are reports that the rare spectacled Andean bear eats the young flower stalks. In some regions the inner pulp of the inflorescence is dried and powdered to use as a flavoring and special "chicha" is made from the roasted and fermented pulp. The dead flower stalk is also burned and the ash made into "lipta" for coca leaf chewing. Sections of the dried inflorescence are used as torches during special festivals and as insulation and construction material. The leaves are utilized with ichu grass as roof thatching, the trunks are made into seats. In the Cordillera Negra we were told that locals have been known to burn the plants because wandering cows sometimes get stuck on the barbed leaves and perish. This exceptional and endangered species has been successfully grown in California, but is still practically unknown in cultivation. Sprout seed like cacti. We have found it to be a slow germinator like *P. herzogii*, from 5-12+ weeks, may benefit from cold treatment. Protect from extreme summer heat. Z7? Seed packet \$7 / 2-4" plant 2-3 years old \$22.50

***Puya raimondii* GP2609** "Cuncush" "Titanca" "Machukawara"

Another important seed collection of the giant queen of bromeliads. This seed was collected by G. Pino just below 12,000' on the road from Ayacucho to Vischongo: Rodal de Titanka, Huamanga Prov., Ayacucho Dept., Peru. Slow to sprout, germinates best after 4-8 weeks of cool temperatures and another several weeks warm. Z7? Seed packet \$7.50 / 2-4" plant 2-3 years old \$23.50

Puya yakespala

Clusters of medium size rosettes of green leaves with white undersides. Impressive 6-12'+ tall, thick, club-like inflorescence covered in a tan wool from which large vibrant yellow flowers emerge. The largest, highest altitude *Puya* in Argentina, known only from populations at Yakespala, Santa Victoria, Salta, 13,000'+. Similar to the equally outstanding *P. herzogii* of Bolivia. A hardy species that deserves wide cultivation. Z8a Seed packet \$4.50 Inquire for plants

***Puya* sp. BK08517.6**

Lovely small species, grey green rosettes to 10–12". Flower stalks to 2'. Flowers unseen. Growing on the rock outcrops around the carved Incan caves at Chinchero, Cusco, Peru, 12,400'. Z8a/b Seed packet \$4.50 *Inquire for plants*

***Puya* sp. BK08521.5**

Rosettes to 5' diameter. New growth frosted silver-white, turning red with age. Leaves have small red teeth along the margins. Fat flower stalks to 6'. Dark green metallic flowers. Gorgeous species growing at the Ollantaytambo ruins, Cusco Dept., Peru, about 9,000'. Z9a–b? 3–4"+ plant 4+ years old \$15.50

***Puya* sp. BK10504.2**

Rosettes to 18" across with serrated broad silver leaves with a red blush. Clusters of 3–4 heads, 12" prostrate stems that look like they've survived repeated fires. 4' inflorescence with densely packed seed pods. Flowers unseen. Growing with *Trichocereus bridgesii*, *Prosopis* sp., *Corryocactus*, *Echinopsis*, etc, Huachjilla, La Paz, Bolivia. An attractive plant. Z8/9? Seed packet \$4.50 / 3–4"+ Plant 4+ years old \$14.50 or 2 for \$24

***Rabiea albinota* (=Nananthus albinotus) "S'Keng Keng"**

Aizoaceae. Small clump forming succulent with white spotted sickle shaped leaves, thick fleshy roots and yellow flowers. Native to South Africa. The Griquas tribesmen were known to dry and pulverize the whole plant to use as an additive to make tobacco "stronger". Contemporary reports describe the effects to be similar to *Scelletium*. Good for the rock garden. Tolerant of high rainfall. Z8a–b Seed packet \$4 *Inquire for plants*

***Rabiea albipuncta* "S'Keng Keng"**

Another desirable South African mesemb, very similar to *R. albinota*, but with thinner, more upright leaves. The same history of traditional use. Z8b Seed packet \$4

Genus *Rhodiola*

Crassulaceae. Some 60+ species of fascinating caudex forming perennial succulents with leafy annual flowering stems. Native to the high mountains and near-polar arctic regions across the northern hemisphere. The roots and caudex of many species have a rose-like scent when cut. Venerated for their psychoactive medicinal properties for thousands of years, said to prolong life and enhance spiritual wisdom. Scientific research has focused almost exclusively on *R. rosea*, shown to have cognitive enhancing, adaptogenic, antioxidant, and a host of other beneficial actions. Other species merit attention, but are extremely rare in cultivation due to their remote habitats. Some may be difficult to grow, but their unusual beauty and beneficial properties makes them worth the effort. Many face imminent extinction due to climatic changes altering their alpine and near glacial environments. This makes the effort to adapt them to cultivation and distribute them to possible new habitats all the more timely. Our efforts to grow them have been mixed, some species expire after a season while others seem to be adapting well. Sow the tiny seeds like cacti. They need a rich, well drained gritty soil, and a bright spot. They prefer regular watering while in active growth. Many species resent heat and can be killed if kept too warm. We find it easiest to grow them in pots and move them to cooler locations during the Summer heat. All species are extremely cold tolerant to at least Zone 7a, some to Z2–3.

Rhodiola heterodonta

Stout branched caudex. Bluish leaves on stems to 10". Yellow orange flowers. Holubec collection at 12,000', Yazgulem Range, Pamir, Tajikistan. Said to be one of the easier species to grow. Known in Chinese medicine as "Yi Chi Hong Jing Tian". Contains a novel phenylethanoid glycoside. Z5a Seed packet \$4

***Rhodiola imbricata* "Shrolo"**

Perennial caudex with short stems to 4"+, lanceolate leaves, pink flowers. Collected by Pavelka near 15,000', Zanskar, India. This magical plant is traditionally used for cough and has been shown to have antioxidant and strong radioprotective properties. Z4a Sold out

***Rhodiola integrifolia* "King's Crown"**

Caudex with multiple succulent stems to 6" topped with deep red flowers. This North American species is found in mountainous regions, up to 13,000'. Made into tea by native tribes, medicinal like other species. Seed from Rocky Mountain, Colorado populations. Z5a Seed packet \$4

***Rhodiola quadrifida* "Si Lie Hong Jing Tian"**

Large caudex, stems to 5"+, linear leaves. Yellowish flowers. Pavelka collection, limestone scree 14,500', Anyemaquen Shan, Qinghai, China. Yet another sacred medicinal species known as "Tsan" in Tibet and "Ere-Gombo" in Mongolia. Z4b Seed packet \$4

Rhodiola pachyclados

Rhizomatic species. Small stems to 3", glaucous rosettes of short notched leaves and white-pink flowers. Native to the mountains of Afghanistan and Pakistan, occurring up to 13,000'. The crushed plant was used for wound healing. Easy to grow. Z4b 2–3"+ plant \$9.50

***Rhodiola rhodantha* "Queen's Crown"**

Caudex with succulent stems to 6". Narrow leaves and pink flowers. Native to the high altitudes of the Rocky Mountains, USA. Young leaves are eaten and the root has energizing properties. Grow like other species. Z5a Seed packet \$4

***Rhodiola rosea* "Rose Root"**

Rosettes of semi-succulent leaves on 1–2' stems. Yellow flower heads, and thick caudex that smells of roses when cut. Native to the Arctic regions of Europe and Asia. The roots have been revered for their cognitive enhancing and medicinal properties for at least 2,000 years. Gaining interest here in the west for its powerful psychostimulant, antioxidant and adaptogenic action. Clinical research is showing *Rhodiola* to be useful for nearly every ailment. Likes bright light but cooler temperatures, avoid Summer heat. Seed from Russia. Z3b Seed packet \$4

***Rhodiola yunnanensis* ex EDHCH 97073 "Hong Jing Tian"**

Caudex with annual stems to 18" bearing whorls of succulent leaves. Pink-purple flowers on female plants and yellowish on the male. Stems turn red in strong light. Forested mountain slopes from 3–12,000' in western and northern China. One of the magical plants of China, used in traditional medicine much like *R. rosea*. Part shade to sun. Easier to grow and more tolerant of heat than *R. rosea*. Originally from collections made in Sichuan Province. Z7a Seed packet \$4

***Rhodiola* sp. ex 03 CH165** Rhizomatic stems to 6", bright yellow flowers. Collected by H. Hansen in China. Z6a Seed packet \$3.50 / Plant \$8.50

Genus *Sceletium*

Aizoaceae. A small genus of low growing succulent shrubs endemic to the karroid areas of Western, Eastern and Northern Cape Provinces, South Africa. The succulent leaves grow in pairs and eventually die away leaving persistent leaf vein skeletons clothing the lower stems, which protect the plants from adverse environmental conditions. The small flowers vary in color from white to yellow and occasionally pale orange or pink. *Sceletium* have a variety of uses in ethnomedicine, being rich in mesembrine alkaloids. A fermented and dried preparation of *S. tortuosum* and other species is known as "Kougoed" and has been used since prehistoric times as a safe and beneficial inebriant. Most of the species are practically unknown in cultivation and endangered in habitat. *Sceletium* is easily grown, sprout seeds as you would for cacti. Seeds may come up irregularly over several months and fluctuation between day and night temperatures as well as periodic drying out seems to help germination. Plants root easily from cuttings. Regular succulent culture. *Sceletium* can become weedy if overwatered and overfed. All should be hardy to Z9a if kept dry.

Sceletium emarcidum "Kanna" "Kougoed"

Aizoaceae. Little pairs of pale green succulent leaves on a small creeping groundcover to 4" high. White flowers. Has the same medicinal/antidepressant use as the more common *S. tortuosum*.
Unrooted cutting \$10.50

Sceletium joubertii SB 979

A sprawling groundcover with pale green succulent leaves. Shiny white yellow flowers bloom winter to early summer. A psychoactive species, similar to *S. tortuosum*, but with a different biochemical makeup. Originally collected by Steve Brack near Bloustering, Little Karoo, South Africa. 10 seed \$4
Unrooted cutting \$9.50

Sceletium rigidum

A small upright growing shrub to 14"+ with attractive lime green leaves that turn purplish in full sun. The large water cells on the surface of the leaves gives them a gem-like appearance. Iridescent pure white flowers. A favorite very rarely seen in cultivation. 10 seed \$4 / Unrooted cutting \$10.50

Sceletium subvelutinum

Caudiciform succulent shrub to 10"+ with flattened and elongated gray-green leaves. Thick tuberous caudex forming roots and large flowers, yellow to pale orange in color. A rare and unusual species with a unique chemical composition. Seed packet \$4 / Plant \$12.50
Unrooted cutting \$9.50 or 3 for \$24

Sceletium tortuosum "Kougoed" "Kanna"

Small sprawling shrub with flat, pale green leaves. Shiny white flowers. The San and Khoi people of South Africa have a long history of using the plant as a hunger and thirst suppressant, analgesic, treatment for colic, and most importantly as a highly esteemed inebriant. The traditional manner of preparation is as follows: The whole plant is crushed between rocks, then placed in a bag and put in the sun to sweat. After a week of "fermenting" the "Kougoed" is removed from the bag and spread out to dry completely. *Sceletium* is known to contain potentially harmful amounts of oxalic acids which the preparation process is thought to reduce. The prepared dried material is chewed, smoked or occasionally taken as a tea or snuff. The effects are reported as quite pleasant and relaxing, decreasing anxiety, stress and tension. There is also a heightening of tactile sensation. Apparently there is no impairment of motor functions; one South African farmer is quoted as expressing that the only way he can tell that his laborers are inebriated is "a sort of far away look in their eyes." No severe adverse effects have been reported, even from chronic use of the plant. In fact, indigenous healers are known to use "Kougoed" to successfully treat alcoholism. Recent pharmacological research has shown *Sceletium* to be highly complex chemically, with as many as 9 alkaloids that are found to fluctuate seasonally. Modern science is looking at the anxiolytic and antidepressant properties of *Sceletium* alkaloids as well as their potential anti-cancer activity. *Sceletium* is now being marketed as a highly effective and safe natural supplement to elevate and regulate mood. Plant gatherers have observed that wild populations of *S. tortuosum* are becoming increasingly scarce, likely due to over collection. Protection through cultivation is encouraged. 10 seed \$4

Plant \$15.50 / Unrooted cutting \$10.50 or 4 for \$32

Sceletium sp. nova

A new species similar to *Sceletium tortuosum* but with smaller lime green leaves, more sprawling habit and vigorous growth. Small white-yellow flowers. Shown to have the same medicinal activity as *S. tortuosum*. Seed packet \$4

Unrooted cutting \$9.50

Sceletium sp. SB661 "Kougoed" "Kanna"

Low growing species with large succulent green leaves. Extra large white flowers. A handsome plant that tends to keep compact growth even when given rich soil and moisture. May be a robust form of *S. tortuosum*. Same medicinal properties as other *Sceletium*. Seed from Brandrivier, South Africa. 10 seed \$4 / Unrooted cutting \$9.50 or 4 for \$28

Sedum andinum GP1642

Crassulaceae. Tufts of tiny succulent stems 1–3" tall. Spirally arranged, spherical, chubby, green leaves clothe the stems, turning reddish-brown in full sun. Small terminal flowers, red with white stripes. This is the neotype: Pino's collection from rocky slopes near the town of Chicla, Huarochiri Prov., Lima Dept., Peru, 12,300'. A delightful miniature *Sedum* new to cultivation. Rooted cuttings. Z8b? 2" plant \$9.50

Sedum berillonianum GP2607

Small creeping succulent 1–3" high. Chubby blue-green leaves in dense spiral arrangement. White-yellow flowers. Originally described by Weberbauer over a hundred years ago, all herbarium sheets were thought lost during WWII and the plant had not been seen in habitat until the inimitable G. Pino relocated it near Ayacucho, Peru where it grows up to 12,000'. Rooted cuts from 3 clones available. Z8b? 1–2" plant \$11.50

Sedum incarum BK08612.7

Small multi-stemmed succulent, 4–6" with spirally arranged triangular leaves. Whitish flowers at branch ends. G. Pino took us to see this attractive rare species growing along with *Echeveria chilensis* amongst scrub near Chicla, Lima, Peru, 12,500'. Z8b Seed packet \$4.50

Sedum niveum CA Native

Miniature clumps of succulent leaves and large white flowers splashed red. Rarely exceeds 2" tall and 6" wide. This alpine species is found between 7–10,000' in the mountains of San Bernadino and Riverside County, CA and Baja. This diminutive gem is scarce in cultivation. Z7a–b Seed packet \$3.50 / 1.5–2"+ plant 3+ years old \$7.50

Sedum aff. reniforme BK09508.3

Small columns to 4–6" with densely packed chubby green-grey leaves. Star shaped white flowers with yellow or pink centers. G. Pino thinks this might be a large form of *Sedum reniforme*, or possibly a new species. Growing on rocks and steep slopes with *Peperomia galioides*, *Peperomia aff. naviculaeifolia* and *Matucana sp.*, *Borzicactus fieldianus*, and *Trichocereus sp.*, on the western mountain above the ruins of Chavin de Huantar to the north side of the Wachesca River, Ancash Dept., 10,900'. Should be hardy to at least Z9a, possibly quite lower. 2"+ plant 3+ years old \$9.50
(See also *Villadea* - close *Sedum* kin)

Sedum sempervivoides

Perfectly symmetrical triangular gray-green leaves in a rosette to 4". Blood red flowers. Native to the Caucasus Mountains. A monocarpic biennial. The plant can be kept perennial by beheading after the first year to force offsets. Prefers mineral soil and sun. One of the most unique and attractive members of this large and varied genus. Z6b Seed packet \$4

***Sedum spathulifolium* CA Native**

Mat-forming succulent with slender stems and rosettes of small flat gray green leaves. Clusters of star shaped yellow flowers. Northern California native found growing on cliffs and rocky areas. Used traditionally to aid child birth and soothe fussy babies. Practically self propagating. Nice as a groundcover or in hanging baskets. Collections from western Sonoma County populations. Z7b Seed packet \$3.50 / 3 cuttings \$5.50

Sedum valens

Clusters of 2–3" rosettes of densely arranged small gray-green leaves. Cluster of bright yellow flowers. Monocarpic. A newly described species from Salmon River Canyon central Idaho. Beautiful and distinct. Surface sow seed. Z5b Seed packet \$4

Sinningia sellovi

Gesneriaceae. Perennial caudex to 6" across from which arise dark-green leaves with stiff fuzzy hairs. 3' arching spikes bearing numerous orange to pink pendant flowers that drive hummingbirds wild. Native to Argentina and Brazil. Does best with good drainage and a bright sunny spot. An excellent container plant. Dies back to the tuber after hard frost. Surface sow the tiny seed. Z7b. Seed packet \$3.50

Sinningia striata

Perennial tuber/caudex with deciduous stems to 12". Beautiful dark green fuzzy leaves with purple-red undersides. Clusters of gorgeous pale pink to cream colored tubular flowers with red striations. Rocky habitat, Pedra Branca, Minas Gerais, Brazil. Strong light for best growth and flowering. Z9b at least. Seed packet \$3.50 / Plant 4+ years old \$12.50 (limited)

***Sinningia* aff. *werdermannii*?**

Forms a large caudex/tuber. Lime-green annual leaves covered in a downy fuzz. Tubular flowers, color not yet seen. Seed from Peru. True *S. werdermannii* is native to Brazil and does not form a caudex, so we're waiting for our plants to flower to get a clear I.D. Makes a great houseplant and choice for caudiciform collectors Z9? Plant 4 years old \$9.50

***Talbotia elegans* (=Xerophyta elegans)**

Velloziaceae. Forms small rosettes of stiff green leaves to about 10". White to pink star shaped flowers borne on thin stems. Native to shady forest areas of the Drakensberg Mountains of South Africa. The plant is tolerant of near total desiccation, reviving quickly when water becomes available. Easy, part to full shade and regular water for best growth. Z8b 2" plant 3+ years old \$12.50

***Tillandsia* sp. BK14516.4**

Bromeliaceae. 3–6"+ rosettes of long, slender, recurved, silver leaves that spiral at the ends. 12"+ inflorescence with numerous lavender to purple blossoms. An epiphyte growing on *Eriotheca ruizii* trees, dry forest above the Apurimac, near Chikisca, 5800'. Somewhat resembles *T. purpurea* from coastal Peru. *Tillandsia* are known to contain interesting medicinal flavonols and are widely used in ethnomedicine. Z10a/b 10 seed \$4 (limited)

***Vellozia* sp.**

Velloziaceae. Grass like clumps of stiff leaves to 1'. Dark purple-black star flowers are held above the foliage on slender stalks. One of many interesting Brazilian species. Normal succulent care. Z10a Seed packet \$4

***Villadia virgata* BK14508.4**

Crassulaceae. A fantastic *Sedum* relative with upright columnar stems to 6". Cylindrical gray-green succulent leaves in dense spiral arrangement. Terminal spike of white flowers. Originally thought to be a new species, recent taxonomical work we contributed to shows it to be the southern range of *V. virgata*. Rock outcrops, Pisac, Cusco Dept. Peru, 10,500'. First introduction. Z9a? 2"+ plant 3+ years old \$11.50

Xerophyta dasyliroides

Velloziaceae. 12" high clumps of upright stems topped with a rosette of stiff, thin green leaves. Lilac colored flowers on slender stalks. Endemic to the rocky mountains of Antoungoun, southwestern Madagascar. Looks like a cluster of dwarf palm trees. Probably medicinal like the South African species. Drought hardy. Sprout like cacti, may benefit from smoke treatment. Z10a? Seed packet \$4

***Xerophyta retinervis* "Isiphemba" "Bobbejaanstert"**

Thick upright stems to 6' tall tipped with elongated strap shaped leaves. Long thin stalks of sweetly scented mauve or pale blue flowers. Plants are found growing on rock outcrops and cliffs in the grasslands of eastern South Africa. The roots are smoked to relieve asthma and smoke from the whole plant is used to stop nosebleeds. Stem bark preparations are reported to have anti-inflammatory and analgesic properties. Only a little is known of the plant's chemistry. Bioflavonoids have been reported from the genus, including amentoflavone also found in *Ginkgo biloba* extracts. Diterpenoids have been isolated from the closely related new world genus *Vellozia*. This peculiar plant, that somewhat resembles a miniature yucca or palm tree, is virtually unknown in cultivation. Sprout the seeds as you would for cacti. General succulent culture is needed. Survives annual wildfires in habitat. Z7b Seed packet \$4

***Xerophyta viscosa* "Isiphemba" "Bobbejaanstert"**

Thick erect stems covered in the remains of leaf bases. Slender grass like leaves adorn the ends of the branches. Gorgeous lilac flowers borne in groups on long thin stalks. Occurs in limited regions of eastern South Africa. Reported to have the same medicinal properties as *X. retinervis*. Exceedingly rare in cultivation, this whole genus shows great promise as cold, drought, and fire hardy medicinal ornamentals. Z7b Seed packet \$4

***Yucca aloifolia* SHL091023.2 "Spanish Bayonet"**

Agavaceae. Single stemmed or simply branched shrub to small tree, 3–20"+. Slender pointed leaves to 20" long. 12" inflorescences bearing many white edible flowers and fleshy purple fruit. Native to Mexico, the Caribbean, and southeastern USA. Seed collected in North Carolina and therefore should be of hardy stock. Traditionally used as a fiber plant, the roots as a soap. One of the oldest *Yucca* in cultivation, since at least 1605. Z6b Seed packet \$3

***Yucca angustissima* RMRP2943-JC "Narrow Leaf Dwarf Yucca"**

Dwarf species to 16–30"+ tall. Rounded heads of very slender leaves 1–2' long with fibrous white margins. 3–4'+ inflorescence with egg shaped cream colored blooms with purplish sepals, pollinated by moths. Southwestern USA. The young fruits were baked and eaten by several tribes. Flowers also have good edibility and the young shoots can be peeled and cooked like asparagus. The Coyotero Apache used the plant for insect and snake bites. The leaf fibers were made into cordage, mats, etc. Leaves were woven into fireplace hoods by the Hopi. The roots make a good soap and were used in marriage ceremonies by the Oraibi. A very hardy plant. Z5a Plant 4+ years old \$9.50

***Yucca baccata* "Datil" "Amole" CA Native**

Forms stemless rosettes of many stiff, spine tipped leaves up to 3' long and 2" wide. A flower stalk up to 5' tall arises from the center of the plant. Clusters of large creamy white flowers followed by fleshy, banana like fruits that grow to 5" long. Grows throughout the south west United States and northern Mexico. Has been utilized since prehistoric times by Native Americans. The leaves and leaf fiber were used for making baskets, ropes and a multitude of other weavings. Boiling the roots makes an excellent soap that is still popular today. The edible flowers and fruits were also an important food source. Easy from seed, plant 0.5" deep and keep warm. Z9a Seed packet \$3

***Yucca brevifolia* "Joshua Tree" CA Native**

Forms an unusual and beautiful tree up to 30' tall. Corky gray bark and curved branches ending in rosettes of sharp narrow 14" long leaves. The numerous fleshy greenish-white flowers are borne on foot long panicles that arise from the center of the rosettes, followed by egg shaped green fruits. Native to the Mojave desert. A slow growing plant that is known to live for several hundred years. The name Joshua tree comes from Mormon pioneers who associated its grotesque shape with the biblical Joshua raising his arms in prayer. The flowers and seeds were once an important food of the indians living in the Mojave and fiber from the roots was used in basket making. Z9a Seed packet \$3

***Yucca elata* BK11224.1 "Soaptree Yucca"**

Branched arborescent species 5 to 30' tall. Dense radial heads of thin leaves to 3' long with smooth white margins. 3 to 7' tall flower stalk with fragrant white blossoms, the state flower of New Mexico. Native to northern Mexico and southwestern USA. Our seed collection from southwestern NM. The leaf fibers were utilized for making all manner of things, from sandals to baskets. The flowers, fruits and seeds were cooked and eaten by the Apache and other tribes. A sweet product was made from the flesh of young stems that were baked, dried then softened in water to eat. The leaves were once widely chewed, but whether this was for nourishment, a pleasurable effect or just simply to process the fibers for cordage is unclear. Like other species, the roots are saponin rich and make an excellent soap. Sun, drought and cold hardy. Z6b Plant 4+ years old \$8.50

Yucca harrimaniae

Small rosettes of thin blue-green leaves. Flower stalks to 2'+ with greenish white blossoms. From seed collected in Wayne Co., Utah, 4,600'. Extremely cold hardy dwarf Yucca to Z5a. Great in the rock garden. Plant 4+ years old \$9.50 (limited)

***Yucca neomexicana* JRT251**

Another attractive dwarf species, this is from the smallest known population, rosettes to no more than 8" diameter. Slender blue-green leaves. Cimmaron Co., Oklahoma, 3600'. Z6b *inquire*

Yucca rostrata

Agavaceae. Upright single trunk to 15' tall with up to several hemispherical heads of slender bluish leaves. 2' inflorescence with white flowers. Native to northern Mexico and west Texas. As with other species the leaves are a source of strong fiber and the blossoms and fruit edible. This is one of the most attractive arborescent *Yucca* and is an excellent and versatile hardy landscape plant. Z7b Seed packet \$3 / Plant 3+ years old \$8.50

***Yucca schidigera* CA Native**

Single or clustering trunk 4–15' tall. Sharp rigid yellow-green leaves 2–4' long. The flower panicles are usually held within the leaves and bear 1–2" cream colored flowers often with a lavender hue. Native primarily to the Mojave Desert. The flowers and seed were eaten, the leaves made into a strong durable fiber and the roots for making an excellent natural soap. Extremely drought hardy. Z6a Seed packet \$3

Ordering Information

We do not ship plants outside the U.S., but seed orders are welcome. Plants are sent bare root unless requested otherwise. If you would like your plants shipped potted add \$1.00 extra per plant ordered (large plants and *Trichocereus* over 6" cannot be shipped potted.) We try to process and ship your order within 1–2 weeks of receiving it. If you do not receive your order within 4–6 weeks of sending it, please drop us a line—USPS is not infallible.

Shipping and Handling

Seeds— First class mail USA \$4.00; Email for current international rates

Plants (USA only)—

First class priority mail= \$10 for the first plant \$2 each additional plant.

Express mail= inquire

***Plants** marked with a single asterisk are large, heavy and have special shipping charges = \$16.00 for the first plant \$2 each additional plant.

Seeds ride free when ordered with plants.

Checks may take several weeks to clear; use money orders or cash for quicker service. No credit cards or Paypal.

California residents add 7.25% sales tax. Sonoma County 8%

You can print out an order form- <http://www.sacredsucculents.com/order-form/>

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