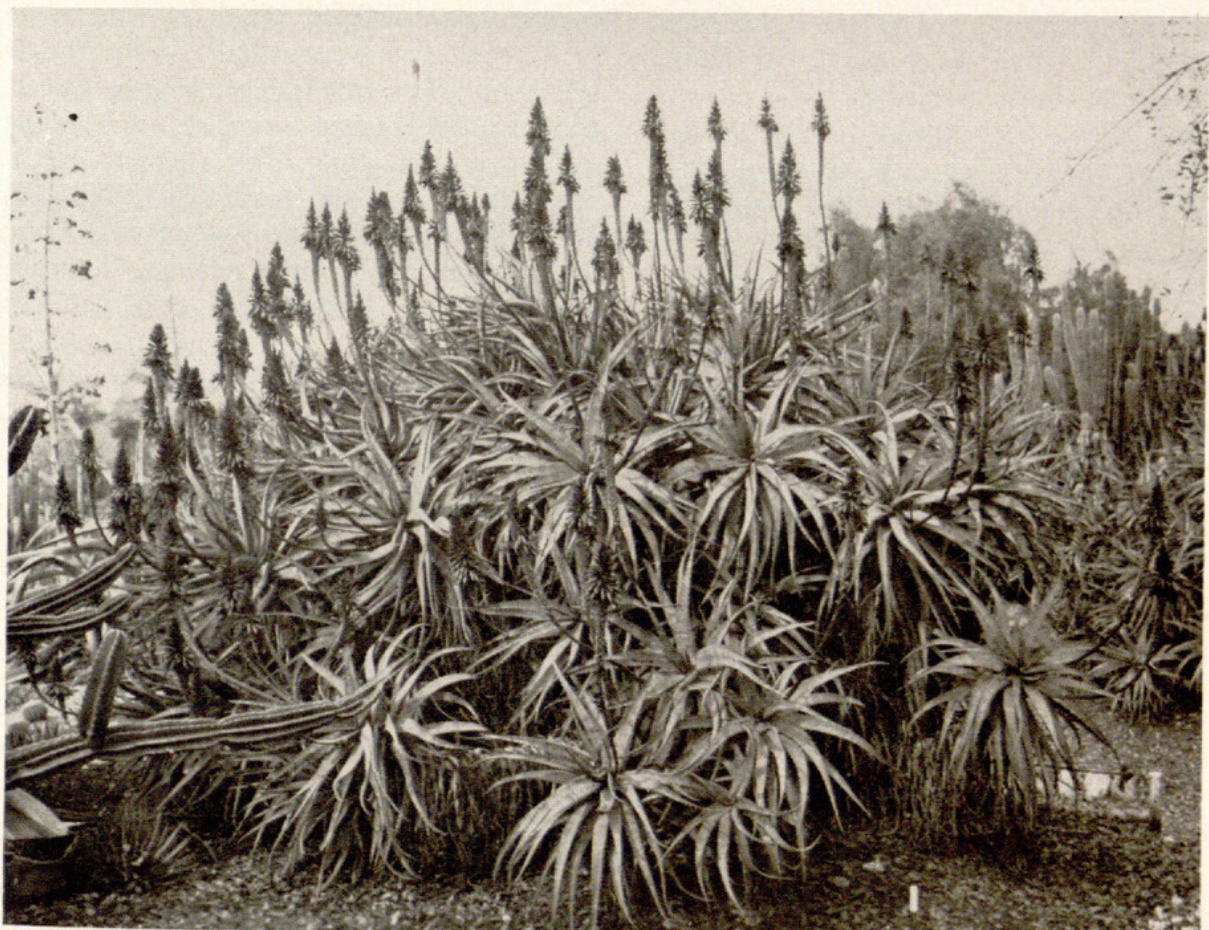




Large specimen of *Aloe arborescens* in the Huntington Botanical Gardens, San Marino, California.

ALOES

WILLIAM HERTRICH

Curator Emeritus, Huntington Botanical Gardens

NOTE: The Educational Committee of the 1953 California International Flower Show is featuring South African Plants in Southern California Gardens. Aloes are distinctively native to various regions of South Africa. This paper will be followed in the early summer issue of *Lasca Leaves* by a supplementary paper "South Africa in Your Garden," by Dr. Mildred Mathias, to acquaint both student and home gardener with plants from that vast land which thrive also in our own Southland.

The Aloes belong to the Lily family (*Liliaceae*). They are indigenous mostly to South Africa. Their distribution, however, extends over many parts of Africa including Ethiopia and some of the islands adjacent to the coast of Africa. Well over a hundred and twenty-five species are known in cultivation and perhaps three or four times as many varieties.

Many Aloes from South Africa wher-

ever else established tend to maintain their flowering season as it occurs in their native habitat, which is from October through April. This is the spring and summer season of South Africa while it is the fall and late winter season of southern California. Consequently in the southern California area these plants produce their most abundant floral beauty during months of the year when gardens tend to lack the brilliant colors they provide—chiefly bright yellows, orange, and authoritative shades of red. The candelabra form of the flowering spikes when in full bloom adds handsomely to the floral beauty of this western part of the United States. For the most part Aloes withstand the winters in this area very well. Exceptions have been recorded in 1913, 1922, 1937 and 1949,

when temperatures fell to 24° F. or lower, and when damage to flora of many kinds was due to the heavy frosts.

Aloes thrive in almost any type of soil, but like the majority of plants they respond to good culture. They prefer an open sunny exposure and do exceptionally well in the coastal belt of southern California, from Santa Barbara region southward to San Diego. Most of the species grown in southern California gardens are hardy but a few can be grown with certain success only in the warmer coastal areas or other frost-free regions. The latter minority are those which are indigenous to the warmer sections of South Africa. Aloes range in size from small species a few inches high to specimens attaining at maturity a height of thirty feet or more and tree-like proportions forming, sometimes, heavy trunks with proportionately heavy branching. The amateur horticulturist could very well assemble a collection of Aloes in southern California that would answer a variety of landscaping needs and would provide a flowering schedule from October to July, the peak of bloom coming in mid-winter. Judicious choice of the species and varieties now available in the trade would assure such a program.

The Huntington Botanical Gardens contain species and varieties of Aloes grown successfully in this region for the past forty years. Experience with them during this period indicates that it is advisable in this climate to renew or replace plants every twenty to twenty-five years, since the younger plants have noticeably more vigor and vitality, producing not only larger spikes but a greater number of them per season. Propagation methods outlined below may be followed to keep a succession of new plants ready for the replacements that need to be made.

The first Aloe plants in the Huntington Gardens were set out while the estate was undergoing landscaping plans to enhance it as a private garden for the pleasure of the Huntington family. Since that time, 1907, a steady increase in the collection has been accomplished by introduction of young plants and seed from several different parts of the world. The Mediterranean

region has supplied much of the stock, from both private gardens and commercial firms; the most notable source was the famed Lord Hanbury garden, La Mortola, in Ventimiglia, Italy. The writer obtained from there some exceedingly interesting additions to the Aloe collection. Other stock came from South African Botanical Gardens after contact had been made for mutual horticultural advantage. True species are not altogether easily secured unless seed is carefully collected from isolated specimens, because Aloes have a tendency toward cross-pollination, aided by insects. Bagging is the usual method followed to prevent this. For sheer ornamental use, however, many of the hybrid Aloes are not only acceptable but in some instances superior to true species—a fact demonstrable at the Huntington Gardens.

During the 18th century Aloes became favored plants in the Mediterranean region for various decorative uses, often in containers as well as in the open ground plantings. Ornate containers holding Aloe plants of the various sizes and types could be seen frequently on balconies or terraces in the homes and gardens of the nobility. Southern California's climate is closely similar to that of the Mediterranean and appropriate modern uses of Aloes could furnish comparably decorative effects in the gardens here where succulents can form such a natural part of the landscaping scheme.

At the turn of the present century very few Aloes had found their way into southern California. The species chiefly grown at that time was *Aloe arborescens*, one of the hardier and more ornamental species. Frequently it was found planted in the old Mission gardens, particularly in San Diego, San Juan Capistrano, and Santa Barbara, where the coastal climate favors its growth and development. *Aloe vera* is another notable species in use at that time and earlier in the history of this country, possibly, in fact, the Aloe mentioned in earliest Greek and Roman history when plants were valued for their therapeutic properties. The historic use of this species forms an interesting study. It is a smooth and grey-green leaved plant with known

medicinal qualities in the leaves, especially effective in the treatment of burns that do not respond readily to other remedies (e.g. X-ray burns). During World War II the demand for the leaves with their healing juices almost exhausted the supply of plants in the Huntington Gardens. In Puerto Rico a planting of considerable size was one time made for experimental purposes. The leaf of this Aloe when cut exudes a mucilaginous substance which causes stain to cloth fabrics that no known cleaning process will remove. Monastery gardens in continental Europe planted this species extensively for medicinal use; Mission gardens on the American continent may have followed suit, and obviously planted them for landscaping effects as well. This particular Aloe has escaped from cultivation in certain areas in Mexico and Lower California where it has tended to naturalize under favorable climatic conditions. Some years ago a number of these escapes were found in the vicinity of a number of the early established Missions. More recently several acres of the plants have been found about twenty kilometers south of the present Mission of Todos Santos in Lower California—a solid mass of them apparently washed into an Arroyo basin.

A curious fact about young Aloe plants has been noted in working with them at the Huntington Gardens—a puzzle to horticulturists because it is a fact contrary to experience with most other plants. During the severe winters of 1937 and 1949 many of the mature Aloe plants having trunks from four to six inches in diameter and four to six feet tall were affected by the frosts in direct reverse to the majority of other kinds of plants in the gardens. The older, more solid-tissued trunks suffered fatal damage from the ground upwards to about a one or two foot height while the succulent younger leaves and portions of the same plants suffered no perceptible damage whatever, either at the time or afterwards. This is one for the chemists to figure out!

Propagation of Aloes is a comparatively easy matter, either from seed, cuttings, divisions, or adventitious rootings. Seed

from the majority of species is abundant and it germinates readily. Germination is accomplished most successfully in seed pans or flats. From such pans young seedlings may be transplanted after a few months to containers allowing more room for the individual seedlings to develop; and from these containers, the young plants may be placed in an open frame or ground bed with little overhead protection. After approximately two years from seeding time, depending upon the species, the plants are usually strong enough to be set out in the open ground. Some of these seedlings will begin to bloom after the third year, others take from five to six years.

A quicker method of propagation is by severing a portion of the plant including a head and planting it directly in the ground or in a container. Roots form quickly and in a fairly short time—a matter of months instead of years—new plants are ready to use for permanent location. Such plants may bloom the first year, but certainly will the second. It does not seem to matter how large the head taken for propagation use; in the experience of the Huntington Gardens, heads weighing as much as twenty to fifty pounds have been successfully rooted. Especially adapted to this method are all species and varieties of the branching types (e.g. *A. arborescens*, *ciliaris*, *plicatilis*, *Salm-Dyckiana*, *spinosissima*, *tenuior*, *striatula*, and others of similar growth habits). This method is known as vegetative propagation.

Root division is still another method. Many of the smaller species and varieties form broad clumps of numerous heads, all of which readily develop root systems which can easily be separated into potential plants of various desired sizes. Other species make underground runners in all directions and severing them at given points immeasurably simplifies the procedure of propagation, for each division quickly becomes a separate plant.

Professional growers who take advantage of the ease with which Aloes may be propagated have found that there is a market for thousands of them as seedlings, used in conjunction with other suc-



Close-up of *Aloe africana* in the Huntington Botanical Gardens. A tall-flowering species.

culents, to be sold as dish-garden plant material or other forms of house-plants. They thrive indoors in atmospheres detrimental to the health of many other types of plants; they travel well, arriving in excellent condition for such uses. Species adaptable to such treatment are *Aloe ferox*, *Marlothii*, and *rupestris*, all of which form striking and often bizarre little plants in their juvenile stages; the rate of growth is slow enough to be accommodating.

A great deal of variation as to size, form and color, occurs among Aloes. For the small garden, a corner might be devoted to them, apart from lawn and perennial and annual beds which require more water than Aloes need. Sometimes a narrow strip between driveway and neighboring wall will provide an ideal location out of reach of sprinkler system or other undue watering device. Such a location is further improved, as far as Aloes are con-

cerned, by raising the level of the ground above normal thus assuring the adequate drainage they require.

The listings of Aloes below include species grown in the Huntington Gardens for many years, proving themselves suitable to a variety of garden situations. Many more might be included were it not for the fact that experience has taught us that some are too tender for general use, in the light of the fact that we occasionally have very severe winters when heavy frosts can destroy, within forty-eight hours, landscaping effects so carefully planned and created. Other species appear to prefer more humid atmosphere than southern California affords in its inland valleys. Still others so closely resemble the listed items that there would be only duplication in effect.

No elaborate botanical description accompanies this listing—only enough information to guide the average horticulturist in choosing the types of Aloes suitable to his or her garden scheme.

SMALL SPECIES

Among the *small species* I would recommend the following:

Aloe aristata—a favorite with many gardeners from the early 19th century to the present perhaps because of the parti-colored foliage, in itself a decorative feature. Flowers range in color from pale tones on the under side unexposed to the sun, to scarlet-coral on the upper, sun-bathed portions. A plant readily adaptable to container culture, similar to *A. variegata* (see below), but hardier.

A. barbertoniae—a native of Barberton in the Eastern Transvaal where summer temperatures range from a minimum of 100° F. Dense rosette of 20-30 leaves of reddish tinge over the green; toothed margins. Flower stalk to 3' Flowers a soft red to coral, with a noticeable bloom; loosely assembled racemes.

A. claviflora—formerly and until fairly recently known as *A. Schlechteri*, but now holding the name given the plant by its discoverer, Burchell, in 1811. It is a somewhat rare type of *Aloe* with definitive characteristics common to no other known species. Short decumbent stems form leaf clusters in rosette pattern. In its native stony ground in well drained positions it follows a curious habit of growth, the clumps developing in circular or semi-circular formation; if in semi-circle, the opening in the horseshoe usually faces west, according to the authoritative accounts of G. W. Reynolds in his recently published monographic material on Aloes. (See Book Review section of this issue of *Lasca Leaves*).

A. Davyana—a dwarf plant bearing flower spikes to 30" tall; coral-colored blossoms in sun-burst effect at terminals.

A. distans—closely allied to *A. mitraeformis* described below, but smaller in all proportions except the breadth of the flowering head which tends to be broad. Somewhat straggling habit of growth; irregularly tiered foliage; flower stalk inclines toward the horizontal.

A. glauca—foliage color-tone self-described in specific name, (from *glaucous*, "with a bluish-white bloom" over pale green); pale red tubular flowers in blunt spike formation. Leaves up to 10" in length; inflorescence to 3'. Reddish marginal spines; and greenish flower tips; makes interesting color tone over-all.

A. grandidentata—forming dense groupings; much sucker growth. Branched inflorescence to 2' or 3'; dull red in general tone when fully opened from yellow buds. Dull green leaves with horny and toothed margins.

A. Greenii—variegated and recurved leaves more attractive feature than the slight sparse inflorescence of faded reddish flowers. Leaves spotted white with broad transverse bands; in dense rosette pattern; each 15" to 18" long, with marginal tan or pinkish teeth. Natively grows best when protected from all-day sun.

A. hereroensis—curiously bunched foliage with pointed tips sharply recurving toward central flower stalk; the latter bearing 12 to 25 flowering heads; individual blossoms deep coral-red, tubular, pinched at tips just allowing yellow anthers to show; in dense umbels. Leaves spotted with "H" shaped white spots.

A. humilis—tends to grow in dense groups of plants; dense foliage clusters, rosette form, blue-green; inflorescence about 1' tall, scarlet to orange flowers, green-tipped.

A. longistyla—compact, almost squat appearance, including short stout inflorescence; leaves dark blue-green; stalk in lavender tones; flowers salmon-pink to coral-red with bright yellow protruding stamens.

A. microstigma—irregularly spotted leaves with whitish "H" shaped markings; individually about 10" in length; inflorescence to 30" tall, single flowers orange-red opening from deeper red buds, with blue-grey tips.

A. mitraeformis—hardy, somewhat sprawling plant; triangular-shaped brittle leaves; branched inflorescence of deep reddish rose. Mature plants if undisturbed cover large areas of ground.

A. mudenensis—of *saponaria* group (see below). Native of Muden, Natal; branched panicles of orange-red to salmon-orange flowers, the younger ones erect, the older almost pendulous; leaves bluish to brownish-green with irregularly undulating bands of dull white to mark them.

A. Peglerae—named for one Miss Alice Pegler who discovered it in Transvaal on rocky slopes, in 1903. Compact, globular, like a loose prickly cabbage with pointed leaves incurved. Short stout columnar inflorescence, at first light brick color, the opened flowers becoming almost chartreuse, accented by purple filaments.

A. pratensis—small bushy plant; glaucous foliage; to 12" in height. Short inflorescence, flowers a soft orange with green tips. Propagation through numerous suckers.

A. saponaria—commonly known as "Soap Aloe" from the Cape of Good Hope where natives use it for its medicinal properties (e.g. indigestion of fowls, diseases of calves, open wounds of live stock). Characterized by broad flat heads of numerous soft yellow-colored flowers. A small hardy plant to about 2' in height in foliage which is soft tone of green, edged with brown horny teeth.

A. Schlechteri—see *A. claviflora*.

A. variegata—one of the most colorful of all the Aloes and one whose foliage is of almost equal interest to the inflorescence which is slender and about 10" high, bearing coral to scarlet flowers in lax racemes. Leaves occur in ranks of three, gracefully clustered, individually sharp "V" shape; dark green with white oblong spots in transverse bands. Especially striking as pot plant, and does well in ground where frost is not factor to consider.

A. virens—dwarf, very free-flowering—a mass of bright red flowers, individually long, tubular, occurring in heads, general effect pendulous. Apple-green leaves; prickled margins. Throws out abundance of suckers. Of doubtful species character; may be hybrid, *A. humilis* one parent, the other unknown; strong grower.

A. zebrina—of the maculate (i.e. spotted-leaved) Aloes, this species is perhaps the most widely distributed in its native South Africa, "extending from Angola on the shores of the Atlantic in the west, across tropical Africa and Portuguese East Africa to the shores of the Indian Ocean in the east," therefore considered one of the most common in that land. At one time an extensive study of the species was made at La Mortola and from that study its accepted descriptions and synonymy have been established. It is a variable species, differing greatly in color and form in different localities. Freely suckering, it forms dense groups; the foliage marked with oval whitish spots carries a purplish tone over glaucous green especially when young. Lax racemes of flowers, dull red in color, are borne on slender flowering stalks to about 4'; well branched.

MEDIUM SIZED SPECIES

A group of Aloes that can be considered for areas requiring somewhat large and spreading growth to cover the ground, are the following *medium-sized* plants:

*A. ciliaris**—a plant similar in creeping habit to *A. distans* and *A. mitraeformis* described above among the smaller-sized Aloes. *A. ciliaris*, however, is capable of easily covering even wider spaces. Thin stems about the size of a pencil tend to clamber in all directions, even over other plants when close at hand. Native records reveal that sometimes these stems

*Climbing or clambering tendencies.

reach 20' lengths. Leaves are comparatively small, grey-green, spreading away from stem, and recurving. Masses of bright coral red flowers on short spikes make a very ornate plant in full bloom. The species was almost eradicated from the Huntington Gardens during the winters of 1937 and 1949, due to being subject to frost damage at 20° F.—the recorded temperature where damage was first noted—this, notwithstanding overhead protection.

A. Chabaudii—forms many broad clumps, and a many-branched inflorescence of dull red blossoms individually small. Somewhat tender. Leaves an olive to glaucous green, broad at base, acutely pointed.

A. parvibracteata—one of the dwarf-sized species among the larger to medium-sized Aloes, as far as foliage is concerned which sets low to the ground; but the flower stalk with branched inflorescences of red flowers often reaches a 4' height. A note of chemical import: the sap dries a deep purple or violet color. (See Reynolds, p. 277.)

A. petricola—a smooth-leaved species like *A. sessiliflora* described below; dull green leaves with reddish tinge in stiffly upright clusters with incurving points. Buds a deeper red than opened flowers which in turn may also be yellowish red when quite matured, the flower spike thus graduated in color tones. Plant grows to 4' tall.

A. pretoriensis—of beautiful subdued coloring, both in foliage and in flowers. Leaves a light green covered with greyish powdery substance. Flowers a rose pink to rose red, also covered with the grey bloom. Inflorescence sometimes to 10' in height. Leaves densely clustered and stiff, about 4 or 5 dozen to a plant.

A. sessiliflora—natively found in protected situations rather than in positions fully exposed to the sun. Spreading rosette of smooth narrow leaves to 18", usually with generous blend of reddish tones over the dark green. Inflorescence to 30", in slender spikes which bear yellow blossoms extremely productive of nectar.

A. striata—about 2½' tall. Leaves 18" long, grey-glaucous with dusty-red overtones; broadly triangular, gracefully incurved, acutely pointed. Smooth leaf surfaces; and one of the few species with entire (untoothed) margins. Inflorescence to 24" tall; broad, flat, coral-orange flower heads, densely massed. No Aloe collection should be without hybrids of the *striata* strain—usually larger than the type and often more beautiful.

*A. striatula**—producing many canes from the root stock, each cane ½" to 1" thick and 5' to 8' long; they fall in all directions, giving the plant clumps a somewhat untidy appearance but to cover open spaces in more or less un-groomed gardens it is excellent reliable plant material; leaves fairly slender, glossy green, deeply recurved toward the ground; flowers reddish-orange in the type, yellow in the

variety, *caesia*. Quickly grown from cuttings. "Creeping" type.

A. succotrina—a variable species, including a large form with single trunk, and distinct branching. Clumps sometimes cover several yards of ground if left undisturbed in their natural groupings. Dark red flowers, and in dry season, the foliage also turns red, of a deep wine tone. Sometimes confused with the Sucotra Island *Aloe*, *A. Perryi*, but *A. succotrina* grows wild only at the Cape.

*A. tenuior**—similar in habit to *A. striatula*, hence another of the creeping type; but somewhat less vigorous; stems more slender but up to 10' in length, enabling the plant to give appearance of covering wide areas of ground. Blooms mid-winter; flowers, yellow. General appearance somewhat straggly but good for yellow-accented ground cover among the more numerous reds.

A. tenuior var. *rubriflora**—only slightly different botanically from the type; the flowers red, with yellow tips.

A. transvaalensis—a variable species with regard to flower-length, shape and color—the latter ranging from flesh pink to orange-red. About 10" to 12" in foliage height, but flowering stalks up to 3' or 4'. Milky-green leaves with confluent white spottings.

A. Wickensii—a most acceptable species with narrow upright, leathery-surfaced leaves of a dull brownish green. Branched inflorescence to 3' bearing red buds which open into yellow flowers, giving a bi-color appearance to the head. Seed of this species brought from South Africa by Dr. Ayres, Jr., seedlings raised in the Arboretum greenhouse, and one now established at the Huntington; although prior to this the species had been grown in the Huntington Gardens some twenty years ago.

LARGE SPECIES

Where larger Aloes can be accommodated, requiring large areas for their full development and effect, the following *large-sized bushy types* may be used:

A. arborescens—much planted in southern California. Many branches from the root stock form ultimately large shrubby specimens of these plants. A mass of single-spined inflorescence, of bright coral, provides much picturesque beauty in mid-winter. Over-all height and breadth often measures about 10' x 10' if undisturbed in its natural growth.

A. plicatilis—the Fan Aloe, worthy of inclusion in any garden. Of slow growth, branching near the base and re-branching repeatedly to form a shrubby specimen which in time becomes broader than tall; often reaching some eight feet in breadth. Leaves smooth and flat; 12" long x 1" or more broad, arranged in groups of 12 to 15 on the sides of the branches, "fanning out" to give the plant its common name. Unfortunately this species is not as hardy as some; two large specimens were fatally damaged during the severe winters of 1937 and

*Climbing or clambering tendencies.

1949. They should be planted more extensively in the coastal regions where such damage is not a hazard, for they are very decorative.

x A. Salm-Dyckiana—a natural South African hybrid—a cross between *A. arborescens* and *A. ferox*, inheriting a robust character from the latter. Stems three times the thickness of those of *A. arborescens*. Inflorescence stout, branched, often beautifully graceful in its candelabra-like form. Flowers a dark red, freely flowering in mid-winter. Perfectly hardy. Mature plants in the Huntington Gardens, 10' to 12' tall and 15' across.

A. spinosissima—a noble plant, one of the best hybrids. Freely branching to form large attractive shrubby specimen. Free-flowering, as well, and hardy.

TALL SPECIES

For background plants a number of *tall, single stemmed species* may be recommended; they are plentiful in number to choose from; the dramatic effects produced make them highly desirable for such purposes:

(Note: the arrangement here is according to size, from the smaller to the larger, rather than alphabetically.)

A. lineata—up to 7' or 8' in plant size, but crowned with group inflorescences which give an added height of two or three feet more when in bloom. "Poker" type flowering spikes are more sparse than those of *A. africana* which this species resembles. Closely related also to *A. glauca*, but having bright green foliage in contrast, and lineate leaves. Salmon pink flowers. Red spines on leaf margins.

A. speciosa—beautiful stiffly curving mass of blue-green pointed leaves in large rosette pattern, often with reddish tinge, an echo of the flower color at the tip of the spike: buds red, opened lower flowers are green. Flower-spike measurement 18", dense and bluntly conical.

A. africana—up to 10' tall or more; a stately plant especially when in flower. Blossoms coral-red to orange. Hardy. Historically interesting: grown in Dutch East India Company's garden in 1695. Very distinctive plant with its narrow, fleshy, recurved, and sharply pointed foliage.

A. pluridens—nearest ally is *A. arborescens* from which it differs in having narrower yellow-green leaves with crowded pink or white marginal teeth. One of the single-stemmed types that tends to branch; over-all height often up to 12'. Flower spikes narrow; scarlet tubular flowers. Recurved foliage gives fountain-effect from which flower stalks emerge.

A. Thraskii—tall pyramidal appearance given by persistence of leaves which fall against the tall single stem and form "beard." Upper, incurved leaves stiffly graceful to support the 10 or 12 flowering spikes on short stems; blossoms, coral color. Natively grows in almost

pure sand, never more than few hundred yards from the sea, in Natal. Highly productive of nectar.

A. rupestris—a remarkably slender type of single-stemmed *Aloe*, with branched inflorescence to 24" in height. Spikes in bicolored effect due to unopened buds toward tip being orange-yellow, opening flowers light lemon yellow, and exerted stamens protruding an accent of vermilion. Foliage usually a dull dark green.

A. ferox—single simple stem, or trunk, heavily bearded with old leaves two-thirds the way up; living foliage a dull green, sharply pointed to reddish tips; inflorescence of six to 10 flower spikes, candelabra-formation, of bright glowing coral-orange. Trunk up to 15' in height, 4" to 5" thick. Freely used in Mediterranean region for decorative potted or tubbed plants.

A. candelabrum—similar to *A. ferox*, but stouter trunk, even more heavily bearded with old leaves. Foliage less armed and some completely smooth.

A. Marlothii—closely allied to *A. ferox*, but heavier trunk, larger leaves which spread horizontally to support the horizontal stretch of the flowering stalks. Flower spikes curve gracefully to vertical tips. Over-all height up to 12' or 16', with trunk diameter to 6". Densely armed foliage. Flowers dusky yellow.

A. dichotoma—in its native Cape Province, grows up to 30' with proportionate branching. Slow-growing in southern California, but surprisingly hardy considering the section of Africa to which it is native. The Huntington specimen is about 12' tall at present writing, with clean light grey trunk about 10" in diameter. Lemon-yellow inflorescence.

LARGEST SPECIES

The *largest* of all known Aloes stands alone:

A. Bainesii—sometimes referred to as "the gigantic Aloe." Fifty-foot specimens not uncommon in its native far-east and west South African habitats. Dense cylindrical-shaped racemes of flowers of coral-pink. Deeply channelled leaves, dull green. Has proved somewhat tender at Huntington Gardens, several specimens lost in 1937 and 1949 during freezes. Should prove suitable, however, for coastal plantings, and should be used more extensively for bold beauty.

NOTE: *The Aloes of South Africa* by Gilbert Westacott Reynolds, published in late 1950, is the source of final reference for nomenclature, habitat, and historical notes used in this article, since the writer feels that this is the best comprehensive work available to date on this subject. Numerous illustrations in color, as well as in half tones, make this a most commendable work to recommend to the reader, gardener, or horticulturist who wishes to pursue the subject further. Excellent references within the book itself lead to the best textual and illustrative material available.



Hertrich, William. 1953. "Aloes." *Lasca leaves* 3(Spring 1953), 17–23.

View This Item Online: <https://www.biodiversitylibrary.org/item/129410>

Permalink: <https://www.biodiversitylibrary.org/partpdf/124880>

Holding Institution

Missouri Botanical Garden, Peter H. Raven Library

Sponsored by

Los Angeles Arboretum

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: The Arboretum Library at the Los Angeles County Arboretum and Botanic Garden

License: <http://creativecommons.org/licenses/by-nc-sa/4.0/>

Rights: <https://www.biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.