

CACTACEAE

by

A. L. STOFFERS

(Instituut voor Systematische Plantkunde, Utrecht)

Stemsucculents, branched or unbranched, columnar, globose or with thick flattened stems or internodes, usually with very small scale-like and awl-shaped, rarely foliaceous leaves; stems and internodes often with warts or ribs, bearing areoles in the axils of the often absent leaves. Areoles mostly covered with felty hairs and spines. Flowers borne on the areoles, mostly solitary, usually actinomorphic, hermaphrodite; the short or long receptacle with areoles and sepal-like bracts which gradually pass into the perianth; perianth indistinctly differentiated into sepals and petals. Stamens numerous, spirally or in groups inserted on the inner face of the hypanthium; filaments free or sometimes adnate to the base of the petals; anthers 2-celled, with longitudinal dehiscence. Ovary unilocular, many-carpellate; style simple; stigma mostly capitate. Ovules many, on several parietal placentas. Fruit a many-seeded juicy berry or sometimes dry and then dehiscent or not. Seeds with straight or curved embryo; peri- and endosperm present or wanting.

Perhaps 2000 species in a various number, ranging from 20 to 180—200 still ill-defined genera; almost all natives of tropical and subtropical America and there in dry areas; a few species of *Rhipsalis* in Africa; *Opuntia ficus-indica* is naturalised in the Mediterranean, South Africa, and Australia.

Key to the genera:

1. Leaves flat and broad, persistent or deciduous, flowers pedicellate.. *Pereskia*
Leaves wanting or very small and early deciduous; flowers sessile..... 2
2. Glochids present (short barbed bristles accompanying spines or even present when spines are lacking); stems distinctly jointed; joints cylindric or flattened, but not ribbed or winged..... *Opuntia*
Glochids wanting; stems often constricted but not distinctly jointed..... 3
3. Plants climbing or clambering, often producing aerial roots..... 4
Plants terrestrial, normally rooting from the base only..... 6
4. Stems 3—5-angled or -winged..... 5
Stems 7—20-ribbed..... *Selenicereus*

5. Receptacle-tube bearing broad leafy scales, spineless..... *Hylocereus*
 Receptacle-tube bearing conspicuous areoles with brown felt and subulate spines
 *Acanthocereus*
6. Stems globular to short-cylindric..... 7
 Stems elongate..... 8
7. Stems ridged, not tuberculate; flowers produced in cephalia (dense terminal mass
 of woolly hairs and reddish bristles) capping the plant..... *Melocactus*
 Stems tuberculate, each tubercle crowned by a tuft of spines accompanied by ra-
 diating bristles; flowers produced laterally below the apex in axils of tubercles;
 cephalium wanting..... *Mammillaria*
8. Fruit globose, spiny; areoles without long hairs; stems with shallow constrictions
 near the top..... *Lemaireocereus*
 Fruit ovoid or subglobose, naked; young areoles usually with long hairs... 9
9. Fruit subglobose, perianth campanulate, persistent, stems often with shallow
 constrictions near the top..... *Cephalocereus*
 Fruit ovoid, perianth funnelshaped, deciduous; stem with numerous constrict-
 ions near the top at 20 cm distance..... *Cereus*

Opuntia Miller, Gard. Dict. Abr. ed. 4. 1754

Cacti, sometimes with definite trunk, usually much branching from the base; branches often spreading, reclining or prostrate; ultimate branches (joints) cylindric to globose or flattened, usually very fleshy but sometimes woody. Areoles axillary, bearing spines, glochids, hairs and flowers. Leaves small, roundish, early deciduous. Spines solitary or in clusters, naked or sheathed, of various colour; glochids usually numerous, borne above the spines. Flowers one at an areole, of various colour. Sepals green or more or less coloured, grading into the petals. Petals widely spreading, of various colour. Stamens much shorter than the petals, sensitive. Style 1, thick; stigma short-lobed. Ovary inferior, unilocular, bearing leaves, the areoles often with spines and glochids. Fruit a berry, dry or juicy, spiny or spineless, globular, ovoid or ellipsoid. Seeds covered by a hard, bony aril, flattened. Embryo curved. Cotyledons large.

About 250 species from Massachusetts to British Colombia south to the Strait of Magellan; several species have been naturalized and have become very abundant locally in the Old World and Australia.

Key to the species:

1. Leeward Group..... 2
 Windward Group..... 4
2. Plant prostrate or partly ascending; joints 3—9 cm long, oblong to oblong-ovate,
 the transverse section oblong-elliptic to roundish; joints readily detached
 *O. curassavica*
 Plants erect; joints more or less disk-like..... 3

3. Joints blue-greenish, spines straight, brown; flowers dark-yellow to wine-red, areoles with few and small glochids..... *O. elatior*
Joints greyish-green; spines greyish-white; flowers yellow..... *O. wentiana*
4. Joint flat and somewhat oval in cross-section..... *O. triacantha*
Joints more or less flat..... 5
5. Plants developing an erect not-jointed trunk; joints of the branches up to 50 cm or more long, narrowly oblong to falcate; trunks usually unbranched; fruit ovoid, pendulous, 6—8 cm long..... *O. rubescens*
Plants usually without a trunk; joints of stem obovate to oblong, grey-green, mottled with yellow and brown; fruit pear-shaped to subglobose, purplish, smooth..... *O. dillenii*

***Opuntia curassavica* (L.) Mill.**

MILLER, Gard. Dict. ed. 8. no. 7. 1768; URBAN, Symb. Ant. 4: 433. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 299. 1913; Fl. D.W. Ind. Isl. 2: 81. 1914; BRITTON & ROSE, Cactaceae 1: 102, fig. 125. 1919; HUMMELINCK, Rec. Trav. Bot. Néerl. 35: 37. 1938; ARNOLDO, Zakflora 42, fig. 56. 1954; Zakflora 101, fig. 56. 1964; Gekw. en nutt. pl. Ned. Ant. 120. 1971; — *Cactus curassavicus* LINNAEUS, Spec. Plant. 469. 1753.

Strongly branched, spreading and prostrate or sometimes partly erect plant; stems to 80 cm long, up to about 20-jointed; joints ovate to obovate, about 3 times as long as wide, in transversal section oblong to elliptic, 3—8.5 cm, green, readily detached and easily rooting. Leaves minute, soon withering. Areoles round to elliptic with many glochids and long, white, cobwebby hairs. Spines 2—14, straight, spreading, whitish or sometimes yellowish when young, becoming white in age, usually brown at the top. Flowers 4.5—5 cm long, diurnal. Receptacle funnelshaped, 4—5 mm deep and 6—7 mm in diam. Tepals broadly cuneate to spatulate, mucronulate, up to 25 × 15 mm, yellow. Stamens numerous, 250—300, covering the receptacle except for the central part of c. 3 mm diam.; filaments 3—6 mm long; anthers versatile, c. 1 mm long. Ovary obconical, 25—30 mm long and 8—10 mm in diam., with 12—20 spineless areoles in the axils of 1—1.5 mm long, triangular scales, bearing many glochids and some long white cobwebby hairs. Fruits not seen.

Aruba, Bonaire, Curaçao, Klein Bonaire, and Tortuga.

Rather common plant, especially outside the limestone region.

Vernacular names: librá, infrou, kaka di poesji (Leeward Group).

***Opuntia elatior* Mill.**

MILLER, Gard. Dict. ed. 8. no. 4. 1768; BOLDINGH, Fl. Ned. W. Ind. Eil. 300. 1913; Fl. D.W. Ind. Isl. 2: 81. 1914; BRITTON & ROSE, Cactaceae 1: 153, plate XXVI, fig. 2. 1919; HUMMELINCK, Rec. Trav. Bot. Néerl. 35: 39. 1938; ARNOLDO, ZAKFLORA 44, figs 55, 74. 1954; Zakflora 101, figs 55, 74. 1964; Gekw. en nutt. pl. Ned. Ant. 120. 1971.

Densely bushy-branched erect plant, up to 4 m tall; joints obovate to oblong or orbicular, 10—20 (—40) cm long, thick fleshy, olive-green. Leaves 4 mm long, green with red-

dish tips. Areoles 2—4 cm apart, minutely hairy, with (2—) 4—8 or sometimes more, unequal, terete spines, 2—7 cm long, dark-brownblack tipped. Flowers 5—6 cm in diam., diurnal. Tepals obovate, mucronate, c. 2 cm long, dark-yellow striped with red or salmon-red to red, yellow towards the base. Stamens numerous, 200—300; filaments pink or red, the longer stamens inserted near the rim of the receptacle; anthers versatile. Ovary obovoid-turbinate, c. 2 cm long and wide; areoles unarmed or nearly so; stigma green, 5-lobed. Fruit obovoid to nearly globose, truncate, 4—5 cm long, when mature reddish, pulp dark red. Seeds about 4 mm wide.

Islands in Gulf of Panama, Columbia, Venezuela, Aruba, Bonaire, and Curaçao.

Rather frequent, especially in higher altitudes.

Vernacular names: tuna, shangran, chau (Leeward Group).

***Opuntia wentiana* Br. & R.**

BRITTON & ROSE, Cactaceae 1: 116. 1919; CHEESMAN, in Fl. Trinidad & Tobago 1: 445. 1940; ARNOLDO, Zakflora 43, fig. 53. 1954; Zakflora 101, fig. 53. 1964; — *Opuntia tuna* auct. non (L.) Miller; BOLDINGH, Fl. D.W. Ind. Isl. 1: 141. 1909; — *Opuntia tunoides* BRITTON & SHAFFER, in BOLDINGH, Fl. Ned. W. Ind. Eil. 300. 1913, non *Opuntia tunoidea* Gibbs.

A few to strongly branched erect plant, up to 2 m tall; joints obovate to elliptic or oval, thick fleshy, 9—20 cm long, roundish at the top, pale green to slightly glaucous. Leaves small and subulate, caducous. Areoles with 4—7 spines, greyish to whitish, 2—7 cm long. Flowers 4—6 cm long, diurnal. Receptacle funnel-shaped, 6—8 mm deep and 9—14 mm across. Inner tepals broadly obovate to cuneate, mucronulate, up to 30 × 25 mm, at first yellow, afterwards becoming somewhat orange to rosa. Stamens numerous, 250—300, covering the receptacle except for the central part of c. 5 mm diam; filaments 5—12 mm long; anthers versatile. Ovary obconical, (15—) 20—30 (—35) mm long and 15—20 (—24) mm in diam, with 15—30 spineless areoles in the axils of 1—2 mm long triangular scales, each areole bearing many glochids and short woolly hairs; style obclavate (5—) 11—20 mm long, 3—5 mm thick at the base and 2 mm at the top; stigma 5—9-lobed. Fruit pear-shaped, 2.5—4 × 1.5—2 cm, usually red; pulp dark red.

Northern coast of Venezuela and adjacent islands, Paraguaná, and La Goajira.

Very common cactus in nearly all types of vegetation on Aruba, Bonaire, and Curaçao.

Vernacular names: tuna, infrou, spaanse juffer (Leeward Group).

Uses: the plants are scorched in dry periods and used as cattle food.

***Opuntia triacantha* (Willd.) Sweet**

SWEET, Hort. Brit. 172. 1826; GRISEBACH, Fl. Br. W. Ind. Isl. 302. 1860 ['1864'] (auth.: Haworth); BOLDINGH, Fl. D.W. Ind. Isl. 1: 141. 1909; Fl. Ned. W. Ind. Isl. 299. 1913 (auth.: P. DeCandolle); BRITTON & ROSE, Cactaceae 1: 112. plate XVIII, fig. 3. 1919; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 610. 1924; QUESTEL, Fl. Isl. St. Bartholomew 158. 1941; FOURNET, Fl. Guadeloupe & Martinique 1036. 1978; — *Cactus triacanthos* WILLDENOW, Enum. Pl. Suppl. 34. 1813.

Stems usually few-branched, half-procumbent or clambering over rocks, sometimes even erect but always low. Joints compressed, oblong to oval, 4—8 cm long, the terminal and often the second and third one breaking off easily; spines usually 3, acicular, 4 cm long or less, white but often drying yellowish. Flowers 5 cm long the ovary included, brownish-yellow to cream-coloured, tinged with pink. Petals obtuse; filaments and style pale-green. Fruit 2.5 cm long, red, spineless.

Puerto Rico, Lesser Antilles south to Guadeloupe.

In dry vegetations.

Vernacular name: spanish lady (Windward Group).

***Opuntia rubescens* Salm-Dyck**

SALM-DYCK, in DECANDOLLE, Prodr. 3: 474. 1828; URBAN, Symb. Ant. 4: 433. 1910; BRITTON & ROSE, Cactaceae 1: 208, figs 263, 264, 266. 1919; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 611. 1924; FOURNET, Fl. Guadeloupe & Martinique 1036. 1978; — *Consolea rubescens* LEMAIRE, Rev. Hort. 1862: 174. 1862; QUESTEL, Fl. Isl. St. Bartholomew 159. 1941; — *Opuntia catacantha* LINK & OTTO, in PFEIFFER, Enum. Cact. 166. 1837; URBAN, Symb. Ant. 4: 432. 1910; BOLDINGH, Fl. Ned. W. Ind. Eil. 299. 1913; — *Consolea cathacantha* LEMAIRE, Rev. Hort. 1862: 174. 1862; — *Opuntia spinosissima* K. SCHUMANN, Mon. Cact. 2nd ed. 705. 1899 p.p., non Miller; — *Opuntia spinosissima* auct. non Miller; BOLDINGH, Fl. D.W. Ind. Isl. 1: 141. 1909.

Tree-like, up to 6 m tall; trunk erect, not jointed, nearly cylindric and up to 15 cm in diam. below, flattened above; branches ascending, with flat, thin, dark-green to reddish-green, oblong to obovate-oblong joints, mostly 2—4 times as long as wide, 10—25 cm long; the terminal joint often much smaller; joints not reticulate-areolate except when young. Areoles 1—1.5 cm apart, bearing 1—6 (or sometimes more) acicular, nearly white, 1—6 cm long spines or spineless; glochids brownish. Flowers yellow, orange or red, about 2 cm in diam. Petals obovate, apiculate, spreading. Stamens about half as long as the petals. Ovary long-tuberculate, 4—5 cm long, about 1.5 cm in diam. Fruit obovoid to subglobose, 5—8 cm long, spiny or spineless. The species possesses proliferating ovaries which falling on the ground develop new plants.

Puerto Rico to Guadeloupe.

Common in the drier parts of the islands.

Vernacular name: sour prickle, sweet prickle (St. Martin).

***Opuntia dillenii* (Ker-Gawl.) Haw.**

HAWORTH, Suppl. Plant. Succ. 79. 1819; BOLDINGH, Fl. D.W. Ind. Isl. 1: 300. 1913; Fl. Ned. W. Ind. Eil. 300. 1913; BRITTON & ROSE, Cactaceae 1: 162, fig. 201, plate XXVIII, fig. 2, plate XXIX, fig. 2. 1919; URBAN, Symb. Ant. 8: 466. 1920; BRITTON & MILLSAUGH, Bahama Fl. 296. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 610. 1924; FAWCETT & RENDLE, Fl. Jamaica 5(3): 278. 1926; QUESTEL, Fl. Isl. St. Bartholomew 158. 1941; LEON & ALAIN, Fl. Cuba 3: 362, fig. 161. 1953; GOODING *et al.*, Fl. Barbados 302. 1965; ARNOLDO, Gekw. en nutt. pl. Ned. Ant. 120, fig. 126. 1971; ADAMS, Flowering plants of Jamaica 274. 1972; FOURNET, Fl. Guadeloupe & Martinique 1037. 1978; — *Cactus dillenii* KER-GAWLER, in Edwards, Bot. Reg. 3: pl. 255. 1818.

Shrubby, spreading plant, growing in broad clumps and often forming dense thickets, or up to 3 m tall, sometimes with terete trunks; joints obovate to oblong, up to 25 × 15 cm, with a more or less undulate margin, bright green when young, bluish-green and somewhat glaucous afterwards. Areoles slightly raised, rather few, with a various number, 1—4 (—10), of up to 7 cm long spines, usually more or less flattened and curved or sometimes straight and terete, yellowish and brown-banded or mottled; brownish in age. Glochids numerous, yellow, wool in areoles short, sometimes brown or white. Flowers 9 cm long, ovary included, with c. 10 yellow petals, 4 cm long and 3 cm wide at the apex, often tinged with salmon-pink near the base, broadly obovate. Stamens numerous; filaments greenish-yellow; style thick, white; stigma lobed, white. Fruit pear-shaped to subglobose, narrowed at the base, 5—7.5 cm long when ripe, purplish, juicy, spineless, edible.

South-eastern United States, from Mexico to northern South America; West Indies.

In dry vegetations.

Vernacular name: sour prickle (Windward Group).

Selenicereus (A. Berger) Britton & Rose, Contr. U.S. Nat. Herb. 12: 429. 1909

Slender, trailing, climbing or clambering elongated cacti, the joints ribbed or angled, irregularly giving off aerial roots. Areoles small, sometimes elevated on small knobs, bearing small spines. Flowers large, often very large, nocturnal. Flowertube elongated, somewhat curved; scales of ovary and flower tube small, usually with long felt hairs and bristles in their axils; upper scales and outer perianth-segments similar, narrow, greenish, brownish or orange. Inner perianth segments broad, white, usually entire. Filaments elongate, weak, numerous, in 2 clusters distinctly separated, one cluster forming a circle at the top of the flower tube, the other scattered over the long, slender throat. Style elongate, thick, often hollow; stigmalobes slender, many, entire. Fruit large, reddish, covered with clusters of deciduous spines, bristles and hairs.

About 20 species from southern Texas through eastern Mexico, Central America, West Indies, and along the coast of South America.

Selenicereus grandiflorus (L.) Br. & R.

BRITTON & ROSE, Contr. U.S. Nat. Herb. 12: 430. 1909; URBAN, Symb. Ant. 430. 1910; BRITTON & MILLSPAUGH, Bahama Fl. 294. 1920; BRITTON & WILSON, Sci. Surv. Porto rico & Virgin Isl. 5: 616. 1924; QUESTEL, Fl. Isl. St. Bartholomew 160. 1941; LEON & ALAIN, Fl. Cuba 3: 369, fig. 166. 1953; ARNOLDO, Gekw. en nutt. plant. Ned. Ant. 123. 1971; ADAMS, Flowering plants of Jamaica 274. 1972; FOURNET, Fl. Guadeloupe & Martinique 1041. 1978; — *Cactus grandiflorus* LINNAEUS, Spec. Plant. 467. 1753; — *Cereus grandiflorus* MILLER, Gard. Dict. ed. 8. no. 11. 1768; URBAN, Symb. Ant. 8: 461. 1920; DUSS, Fl. phan. Ant. franç. 317. 1897; BOLDINGH, Fl. D.W. Ind. Isl. 1: 140. 1909; Fl. Ned. W. Ind. Eil. 296. 1913; FAWCETT & RENDLE, Fl. Jamaica 5(3): 280. 1926.

Cactus with clambering stems emitting aerial roots; stems 2—3 cm thick, green or bluish-green, with 7—8 rather sharp, low ribs separated by broad rounded intervals. Areoles with 7—8 acicular spines, yellowish-brown or brownish, in age grey, 2—5 mm long and long thin hairs especially in the younger parts. Flowerbuds covered with tawny hairs. Flowers 18 cm long or more (up to 30 cm). Tepals numerous, the outer narrow,

salmon-coloured, the inner white, acute, entire. Stamens 600—700. Styles often longer than the inner perianth segments; stigma 17—20-lobed. Fruit ovoid, 8 cm long.

Jamaica and Cuba; widely cultivated and escaped from cultivation in tropical America.

Hylocereus Britton & Rose, Contr. U.S. Nat. Herb. 12: 428. 1909

Climbing cacti, often epiphytic, with long elongated stems, 3-angled or 3-winged, branches emitting aerial roots. Areoles bearing a tuft of felt and several short spines or areoles, on juvenile growths often bearing bristles. Flowers very large, nocturnal, funnelshaped, the limb as broad as long and as long as the tube or longer. Ovary and tube bearing large foliaceous scales but no spines, felt, wool or hairs. Outer perianth segments similar to the scales on the tube but longer. Petaloid perianth-segments narrow, acute or acuminate, mostly white, rarely red. Stamens very many, in 2 series, equaling or shorter than the style; style cylindric, rather stout and thick, the linear stigma-lobes numerous, simple or branched. Fruit spineless but with several or many persistent foliaceous scales mostly large and edible. Seeds small, black.

About 20 species, natives of Mexico, Central America, South America, and West Indies.

Hylocereus trigonus (Haw.) Saff.

SAFFORD, Ann. Rep. Smith. Inst. 1908: 556, fig. 268. 1909; URBAN, Symb. Ant. 4: 430. 1910; BRITTON & ROSE, Cactaceae 2: 192, fig. 268. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 615. 1924; GOODING *et al.*, Fl. Barbados 302. 1965; ARNOLDO, Gekw. en nutt. plant. Ned. Ant. 76. 1954; Gekw. en nutt. plant. Ned. Ant. 118. 1971; FOURNET, Fl. Guadeloupe & Martinique 1040. 1978; — *Cereus trigonus* HAWORTH, Syn. Pl. Succ. 181. 1812; BOLDINGH, Fl. Ned. W. Ind. Eil. 297. 1913.

Cactus with clambering stems emitting aerial roots, sometimes 10 m long, joints up to 50 cm long, 3—4-angled, deep-green, margin of the ribs strongly undulate but not horny. Areoles borne on the top of the undulations. Spines usually 8, (2.5—) 4—7 mm long, greenish or dark brown, usually with 2 accessory spines or bristles. Flowers up to 30 cm long. Tepals more than 30, white, 9 cm long and 3 cm wide. Ovary bearing large foliaceous scales. Fruit oblong or oblong-ovoid, to 12 cm long, red, with large foliaceous scales.

Hispaniola, Puerto Rico, Virgin Islands, Saba, St. Eustatius, St. Martin.

Vernacular names: slinger cactus (Leeward Group); cult.

strawberry (Windward Group); escaped.

Acanthocereus Britton & Rose, Contr. U.S. Nat. Herb. 12: 432. 1909

Weak, elongated, many-jointed cacti, at first erect but soon clambering or trailing, the joints usually strongly 3-angled, sometimes 4—5-angled; seedlings and juvenile branches not as strongly angled, with more ribs and with different spines, 1 at an areole. Flowertube remaining rigid after anthesis, gradually drying and remaining on the ripe fruit, green, rather slender, expanded toward the summit, bearing a few areoles similar to those of the branches, subtended by small scales; limb somewhat shorter than the tube, widely expanded; outer perianth-segments narrowly lanceolate to linear, acuminate,

green, shorter than the white inner segments. Stamens 700—900, not extending as far as perianth-segments, attached all along the upper half of the tube or throat. Style very slender, divided at the apex into several linear stigma-lobes. Fruit spiny or naked, with a thick, dark-red string breaking irregularly from top downwards; flesh red. Seeds numerous, black.

Especially about the Gulf of Mexico and the Caribbean, but occurring also along the coasts of Texas and Florida; recorded from Cuba, Venezuela and Colombian coasts, and in Central America and Brasil.

***Acanthocereus tetragonus* (L.) Hummelinck**

HUMMELINCK, *Succulenta* 20: 165, figs 9, 10, 11. 1938; ARNOLDO, *Zakflora* 44, fig. 68, 69, 70. 1954; *Zakflora* 99, fig. 68, 69, 70. 1964; Gekw. en nutt. pl. Ned. Ant. 115, fig. 60. 1971; — *Cactus tetragonus* LINNAEUS, *Spec. Plant.* 466. 1753; — *Acanthocereus pentagonus* (L.) BRITTON & ROSE, *Contr. U.S. Nat. Herb.* 12: 432. 1909; *Cactaceae* 2: 123, fig. 182, 183, 184, plate XVI, fig. 1. 1920; — *Cactus pentagonus* LINNAEUS, *Spec. Plant.* 467. 1753; — *Cereus napoleonis* GRAHAM, in *Bot. Mag. t.* 3458; BOLDINGH, *Fl. Ned. W. Ind. Eil.* 296. 1913; *Fl. D.W. Ind. Isl.* 2: 71. 1914; HUMMELINCK, *Rec. Trav. Bot. Néerl.* 35: 42. 1938; CHEESMAN, in *Fl. Trinidad & Tobago* 1: 459. 1940; FOURNET, *Fl. Guadeloupe & Martinique* 1039. 1978.

Stems clambering, usually 2—3 m, sometimes up to 7 m high, in open fields however arching by rooting at the tips of joints and so forming large colonies; old trunk becoming nearly round in cross-section, 5 cm or more in diam.; joints 3—8 cm wide, 3—5-angled, crenate; juvenile growth nearly terete with 6—8 low ribs and numerous short acicular spines; areoles on normal branches 3—5 cm apart; spines grey, acicular to subulate; radial spines at first 6—7, 1—4 cm long, central spine often solitary, longer than the radials; on older areoles spines often up to 12, of which several centrals. Flowers 14—20 cm long. Tepals 60—65, oblanceolate to elliptic, acuminate or acute, 2—4.5 cm long, white, outer tepals greenish. Stamens 700—900; filaments 2.5—6 cm long; anthers innate, 1.5—8 mm long. Ovary ovoid, bearing conspicuous areoles with brown felt and several subulate spines. Fruit ovoid to obovoid, red, 8 × 5 cm, areolate. Seeds many, slightly flattened, c. 4 mm long, pear-shaped, smooth, glossy black.

Keys of southern Florida, coast of Texas, south along eastern coast of Mexico to Guatemala and Panama, coast of Colombia and Venezuela, islands off the Venezuelan coast, and Guadeloupe; recorded also from St. Croix and Cuba.

In Curaçao known from the Seroe Christoffel only; in Aruba rather common.

Vernacular name: cadushi di colebra (Leeward Group).

***Melocactus* Link & Otto, Verh. Ver. Beförd. Gartenbau Kön. Preuss. Staat. 3: 417. 1827**

Plants solitary or clustered, globular to short cylindric, sometimes depressed, at least when young, 1-jointed, bearing clusters of spines on the ribs; ribs 9—20, mostly straight, rarely spiraled in some individuals. Inflorescence a compact mass of hairs and bristles forming a cephalium borne at the top of the plant, this often very large and elongated. Flowers small, pinkish, appearing in the mid-afternoon from the top of the cephalium, tubular-salverform, the perianth-segments spreading. Stamens attached near

the top of the slender flower-tube. Style slender; stigma-lobes linear, few. Fruit clavate, naked, red or rarely white. Seeds black.

A genus of c. 40 species in the drier regions of the neotropics.

Note: W. F. R. Suringar and J. V. Suringar distinguish 112 taxa on the islands of Aruba, Bonaire, and Curaçao. A thorough fieldstudy on these specimens is necessary for an interpretation of the forms present.

Mammillaria Haworth, Syn. Plant. Succ. 177. 1812

Plants globose, depressed-globose or short-cylindric, occasionally much elongated, tuberculate, some with milky others with watery juice; tubercles arranged in more or less spiral rows, never on vertical ribs, terete, angled or sometimes flattened, never grooved on upper surface, usually bearing wool or hairs and sometimes bristles, but without glands in their axils and crowned by the spine areoles; spines in clusters on top of tubercles, sometimes all alike, sometimes with central ones very different from the radials, all straight or sometimes one or more of the central spines hooked. Flowers diurnal, all from axils of old tubercles, much alike as to size and shape, more or less campanulate, comparatively small, variously coloured, commonly red, yellowish or white to pinkish. Perianth segments rather narrow, spreading. Stamens numerous, included; style about the length of the stamens; stigma-lobes linear. Fruit usually clavate, rarely if ever globose, usually ripening rapidly, naked, scarlet, white or greenish in a few species. Seeds brown or black.

About 150 species, from south-western United States and Mexico through Central America to northern South America; West Indies.

Key to the species:

1. Central spines 3—5, 7—8 mm long; radial spines 10—16, 5—8 mm long; tubercles 7—12 mm long, 4—8 mm wide at the base; axils with scant wool (Curaçao) *M. mammillaris*
Central spines 1, up to 2 cm long, radial spines 6—8, 10—30 mm long, tubercles 10—15 mm long, 10 mm wide at the base; axils with dense wool (St. Martin) *M. nivosa*

Mammillaria mammillaris (L.) Karst.

KARSTEN, Deutsche Fl. 888. 1882; — *Cactus mammillaris* LINNAEUS, Spec. Plant. 466. 1753; — *Mammillaria simplex* HAWORTH, Syn. Plant. Succ. 117. 1812; GRISEBACH, Fl. Br. W. Ind. Isl. 300. 1860 [1864]; JOHNSTON, Proc. Bost. Soc. Nat. Hist. 34(7): 241. 1909; BOLDINGH, Fl. Ned. W. Ind. Eil. 298. 1913; Fl. D.W. Ind. Isl. 2: 80. 1914; ARNOLDO, Zakflora 45, fig. 66. 1954; Zakflora 100, fig. 66. 1964; Gekw. en nutt. pl. Ned. Ant. 119. 1971; — *Neomammillaria mammillaris* BRITTON & ROSE, Cactaceae 4: 70. 1923; CHEESMAN, in Fl. Trinidad & Tobago 1: 462. 1940.

Body simple, globose to short-cylindric, with sunken apex, up to 20 cm high; tubercles short, 5—7 mm long, conic, arranged in 8 and 13 spirals, glossy light to dark green, 7—12 mm long, 4—8 mm wide at the base. Areoles round, 2—3 mm wide, with dense light brown wool when young. Axils with scant wool. Central spines 3—5, 7—8 mm

long, upper ones longer, all subulate, straight or upper occasionally slightly bent, all smooth, reddish-brown with darker tip, becoming grey. Radial spines 10—16, 5—8 mm long, acicular, straight, smooth, reddish, later grey, nearly horizontal to somewhat ascending. Flowers funnelform, 10—12 mm long. Outer perianth-segments brownish-green, top row dark brown, elliptic, tip long-mucronate. Inner perianth segments whitish-cream to pale yellow, lanceolate, tip acute. Anthers yellowish. Stigma-lobes 5—6, greenish-yellow. Fruit carmine-red, clavate, 10—20 × 6—8 mm, with dried perianth not persisting. Seeds brown, minute, roughened.

Northern Venezuela and adjacent islands.

Rare; on steep, often rocky sites, especially in the eastern part of the island.

Mammillaria nivos Link

LINK, in PFEIFFER, Enum. Cact. 11. 1837; URBAN, Symb. Ant. 4: 432. 1910; FOURNET, Fl. Guadeloupe & Martinique 1038. 1978; — *Cactus nivosus* KUNTZE, Rev. Gen. Plant. 1: 259. 1891; — *Neomammillaria nivos* BRITTON & ROSE, Cactaceae 4: 71. 1923; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 617. 1924; QUESTEL, Fl. Isl. St. Bartholomew 157. 1941.

Body simple, globose to nearly cylindric, 8—18 cm wide; tubercles arranged in 8 and 13, 11 and 17, 13 and 21 spirals, firm in texture, darkgreen to bronze, elongate conic, laterally compressed, with milky sap, 10—15 mm long, 10 mm wide at the base. Areoles round, 2—3 mm wide, with white wool when young, becoming naked. Axils with dense white wool which persists but no bristles. Central spines 1, up to 20 mm long, stout, acicular, straight, smooth, bright yellow becoming dark brown. Radial spines 6—8, 10—30 mm long, lateral longest, all acicular, straight or somewhat bent, stiff, smooth, bright yellow becoming dark brown, ascending. Subradial spines 5—7, 2—8 mm, upper shorter, bristle-like to acicular, lateral heavier, lighter in colour than the radials, horizontal. Flowers 15—20 mm long. Outer perianth segments pale yellow at the base, very faint orange midline, orange at the very tip, lanceolate, tip acuminate, margin finely serrate. Inner perianth segments cream to citron-yellow, linear-lanceolate, tip acuminate to acute, margins serrate. Filaments pale tannish-yellow, 1 mm long, just overtop anthers. Fruit red to scarlet, clavate, 12—18 × 7 mm with dried perianth not persisting. Seeds light brown, dull, pyriform with lateral hilum, roughened, 1.1 × 0.8 mm.

Southern Bahamas, Tortola, Antigua, Puerto Rico & Virgin Islands, and some other islands of the West Indies.

Not common; on steep sites and on coral limestone.

Lemaireocereus Britton & Rose, Contr. U.S. Nat. Herb. 12: 424. 1909

Plants usually large, tall and branching but rarely low. Areoles rather large, felted; spines usually stout and numerous. Flowers diurnal or in some species nocturnal, one at an areole, tubular to funnel-shaped or campanulate, the short tube tardely separating with the style from top of the ovary. Stamens numerous, borne in many rows on the inner surface of the throat; ovary more or less tuberculate, bearing scales felted in the axils, the areoles at first spineless or nearly so, soon developing a cluster of spines. Fruit globular to ovoid, irregularly bursting when old, exposing the seeds, at first very spiny, but when ripe the spines often deciduous. Seeds many, black.

Over 20 species, from southern Arizona and Cuba to Peru and Venezuela and the islands off its coast.

***Lemaireocereus griseus* (Haw.) Br. & R.**

BRITTON & ROSE, Contr. U.S. Nat. Herb. 12: 425. 1909; BRITTON & ROSE, Cactaceae 2: 87, fig. 129, plate 13, fig. 2. 1920; WILLIAMS, in Fl. Trinidad & Tobago 1: 458. 1940; ARNOLDO, Zakflora 42, figs 60, 63, 65. 1954; Zakflora 100, figs 60, 63, 65. 1964; Gekw. en nutt. pl. Ned. Ant. 118, fig. 130. 1971; — *Cereus griseus* HAWORTH, Syn. Plant. Succ. 182. 1812; BOLDINGH, Fl. Ned. W. Ind. Eil. 296. 1913; Fl. D.W. Ind. Isl. 2: 71. 1914.

Tall, tree-like, strongly branched at the top and sometimes also branching near the base; old trunk without ribs and spines, with a weakly developed corklayer peeling off in thin flakes, up to 35 cm in diam; branches ascending, sometimes with shallow constrictions; ribs 5—10, 1.5—2.5 cm high, dark green, glaucous, the younger parts often reddish. Areoles round to ovate, 8—12 mm across, 1—2.5 cm apart, spiny, covered with greyish felt without long hairs. Spines 7—12, acicular, straight and stiff, grey but the tip black. Central spines 1(—3), 2—5 cm long; radial spines 7—11, spreading, distinctly smaller than the centrals. Flowers nocturnal, 6—8 cm long. Perianth segments oblong and sometimes mucronulate, 4—3 times as long as wide, 18—26 mm long, cream coloured, rosa or white, fimbriate at the apex. Receptacle funnelshaped, thick-fleshy, 3—4.5 cm long, 1—1.5 cm wide at the base, 2.5—3 cm wide at the top, near the top several imbricate, spatulate, for the greater part adnate, fleshy bracts, towards the base reduced into a few scales. Ovary bearing numerous small white-felted areoles, developing spines in the ripening of the fruit. Stamens 600—800; filaments 12—27 mm long, free at the base; anthers innate, 1.75—2.5 mm long, yellowish. Ovary ovoid, 1.5—2.5 × 1.25—1.5 cm, with 30—50 areoles, covered with felt and often provided with a few small spines in the axils of 1.5 mm long deltoid scales. Fruit subglobose, 2.5—5 cm across, reddish, areoles bearing 12—20, spreading, up to 1.25 cm long spines; pulp red. Seeds 1—2 × 1.25 × 0.75 mm, rough, rather dull black.

Aruba, Bonaire and Curaçao.

Abundant in the islands of the Leeward Group, in many types of vegetation.

Vernacular names: datu, jatu (Leeward Group).

Uses: the wood is used for fences, roofs and walls; fruit edible.

***Cephalocereus* Pfeiffer, Allgem. Gartenzeitung 6: 142. 1838**

Elongated cacti, various in habit, mostly columnar and erect, sometimes much branched with a short trunk. In some species the areoles form a pseudocephalum, in other species not, flowers are sometimes produced in a circle at the top of the branches and the bristles and fruits afterwards forming a collar at the base of the new growth and again in other species neither wool nor hairs are produced in the flowering areoles. Flowers nocturnal, short-campanulate to short-funnelform or pyriform, straight or curved. Perianth persisting on the ripening fruit. Fruit usually depressed-globose, sometimes oblong. Seeds black, smooth or tuberculate.

Nearly 50 species from southern Florida and northern Mexico to eastern Brazil and Ecuador.

Key to the species:

1. Perianth-segments rounded or mucronate; Leeward Group.....
..... *C. lanuginosus*
- Perianth-segments acute; Windward Group..... *C. royenii*

Cephalocereus lanuginosus (L.) Br. & R.

BRITTON & ROSE, Contr. U.S. Nat. Herb. 12: 417. 1909; BOLDINGH, Fl. Ned. W. Ind. Eil. 297. 1913; Fl. D.W. Ind. Isl. 2: 71. 1914; BRITTON & ROSE, Cactaceae 2: 49, fig. 73. 1920; HUMMELINCK, Rec. Trav. Bot. Néerl. 35: 45, t.9 a, d, t.12 a. 1938; ARNOLDO, Zakflora 43, figs 57, 59, 61, 64. 1954; Zakflora 99, figs 57, 59, 61, 64. 1964; Gekw. & nutt. pl. Ned. Ant. 115. 1971; — *Cactus lanuginosus* LINNAEUS, Spec. Plant. 467. 1753; — *Pilocereus* RÜMPLER in FÖRSTER & RÜMPLER, Handb. Cactaceae, ed. 2. 682. 1885; — *Pilosocereus lanuginosus* (L.) BYLES & ROWLEY, Cact. & Succ. Journ. Gr. Brit. 19: 3, 66. 1957.

Often a tree-like plant, much branched or nearly simple, up to 10 m tall; trunk 15—25 cm in diam., with a very weakly developed corklayer peeling off in thin flakes; branches strongly ascending, sometimes curved and often with several shallow constrictions; ribs 8—12, 1—2 cm high, green, greyish or glaucous. Areoles elliptic to roundish, 4—8 cm across, 1—1.5 cm apart, spiny, covered with a grey or brownish felt, the younger ones with many thin woolly hairs up to 2 cm long; flowering areoles with dense tufts of hairs. Spines 10—20, usually differentiated into central and radial spines, acicular, straight, flexible, mostly round, yellow or yellowish-green, afterwards brownish or greyish. Central spines 1—5, 1.5—5 cm long; radial spines 9—15, more or less spreading. Flowers about 6 cm long. Inner tepals ovate to oblong, apiculate, 3—2.5 times as long as wide, 16—22 mm long, cream-coloured or somewhat greenish, somewhat fimbriate at the apex. Receptacle campanulate, thick, fleshy, 3 cm long and 2—2.5 cm wide at the base, 2.5—3 cm wide at the top and there with several imbricate, ovate, fleshy bracts, near the base reduced to a few subdeltoid, 1.5—4 mm long scales. Stamens 400—500; filaments 6—18 mm long, the lowest filaments connate at the base into a 3—5 mm high collar; anthers innate, 1.75—2.75 mm long, greyish. Ovary short, cylindric, 1 × 2 cm with a few deltoid scales; style cylindric, c. 4 cm long and 2—2.5 mm thick; stigmalobes 10—15, 3—4 mm long, yellowish-green. Fruit depressed-globose, up to 3.5 × 5 cm, green or somewhat reddish, with a few scales; pulp reddish. Seeds 1.75 × 1.25 × 0.75 mm, covered with very low and very flat tubercles, glossy black.

Paraguaná, Goajira, islands off the Venezuelan coast.

Very common on the Leeward Group.

Vernacular names: cadushi di poesji, breebee di poesji, fono, funfun (Leeward Group).

Uses: fruit is edible; wood is used for some purposes.

Cephalocereus royenii (L.) Br. & R.

BRITTON & ROSE, Contr. U.S. Nat. Herb. 12: 419. 1909; Cactaceae 2: 50, fig. 74. 1920; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 612. 1924; — *Cactus royenii* LINNAEUS, Spec. Plant. 467. 1753; — *Cereus royenii* MILLER, Gard. Dict. ed. 8. no. 7. 1768; — *Cephalocereus nobilis* (HAWORTH) BRITTON & ROSE, Contr. U.S. Nat. Herb. 12: 418. 1941; Cactaceae 2: 44. 1920; Fournet, Fl. Guadeloupe & Martinique 1039. 1978; — *Cereus nobilis* HAWORTH, Syn. Plant. Succ.

179. 1812; — *Pilocereus royeri* (L.) RÜMLER in FÖRSTER & RÜMLER, Handb. Cact. ed. 2. 682 1885.

Stout tree-like cactus, 2—8 m tall or more, either branching near the base or with a short definite trunk up to 30 cm in diam.; branches stout, erect or ascending, glaucous, at least when young, green to bluish-green; ribs 7—11, high. Areoles many, softly woolly, close together; spines acicular, very variable, often only 1 cm, but sometimes 6 cm long, yellow fading grey; young areoles bearing soft wool. Flowering areoles producing conspicuous tufts of long white hairs. Flowers about 5 cm long, greenish, yellow to purplish without. Inner perianth-segments white, acute. Fruit reddish or green, depressed, 5 cm wide; pulp red. Seed black, shiny.

Antigua to Anegada, St. Croix, St. Thomas, Culebra, St. Kitts, St. Eustatius, and Puerto Rico. Frequent in dry vegetations in the lower zone of St. Eustatius.

Cereus Miller, Gard. Dict. Abr. ed. 4. 1754

Stems mostly upright and tall, generally much-branched; branches strongly angled or ribbed. Areoles spiny, more or less short-woolly, but never producing long, silk hairs. Flowers nocturnal, elongated, funnelshaped; the upper part except the style, falling away from the ovary by abscission soon after anthesis; tube of the flower cylindric, expanding above into the swollen throat, nearly naked without. Outer perianth segments obtuse, thick, green or dull coloured, the inner thin, petaloid, so far as known white. Stamens numerous, varying greatly in length, slender and weak, included. Style slender, elongated but often included; stigma-lobes linear. Receptacle bearing a few scales, naked in their axils. Fruit fleshy, red, rarely yellow, naked, splitting down on one side when mature; often edible. Seeds black.

About 25 species from the southern West Indies through South America to Argentina.

Cereus repandus (L.) Mill.

MILLER, Gard. Dict. ed. 8. no. 3. 1768; GRISEBACH, Fl. Br. W. Ind. Isl. 301. 1860 ['1864'] (auth.: Haworth); BOLDINGH, Fl. Ned. W. Ind. Eil. 297. 1913; Fl. D.W. Ind. Isl. 2: 71. 1914; BRITTON & ROSE, Cactaceae 2: 17, fig. 18, 19. 1920; HUMMELINCK, Rec. Trav. Bot. Néerl. 35: 48. 1938; ARNOLDO, Zakflora 42, fig. 58, 62, 67. 1954; Zakflora 100, figs 58, 62, 67. 1964; Gekw. en nutt. pl. Ned. Ant. 116, fig. 129. 1971; — *Cactus repandus* LINNAEUS, Spec. Plant. 467. 1753.

Tree-like plant, 6—10 m tall, with a much-branched top; old trunk to 40 cm across, without ribs and spines, with a weakly developed corklayer which peels off in thin flakes; branches ascending, with numerous constrictions at c. 20 cm distance; ribs 9 (8—12), 1—2 cm high, crenate, greyish-green, green or glaucous, the younger parts often somewhat reddish. Areoles round, 3—6 cm across, 0.5—2 cm apart, spiny, covered with a grey or brownish felt; the younger ones usually with several thin hairs. Spines 8—20, 2—8.5 cm long, the central ones not always different from the radial ones, acicular, flexible, straight, often twisted, greyish, with dark brown or black top. Central spines 1—7, the longest directed upwards, 2—6.5 cm long. Radial spines 7—13, spreading, usually distinctly smaller than the central ones. Flowers 6—11 cm long, nocturnal. Inner tepals ovate to lanceolate, apiculate, 2.5—4 times as long as wide, up to 26 mm long,

white or greenish or sometimes rosa, apex sparsely and minutely fimbriate. Receptacle funnel-shaped, narrowed in the middle, to 4.5 cm long, 2.5—3 cm wide at the top, thick and fleshy. Bracts several, imbricate, spatulate, for the greater part adnate, fleshy, reducing towards the base to a few small scales. Stamens 500—600, inserted on the upper half of the receptacle; filaments 7—18 mm long, entirely free at the base; anthers innate, 2—2.5 mm long, yellowish. Ovary cylindric to ovoid, 1.75—3.5 cm long and 1.25—1.75 cm wide, with a few remnants of scaly bracts; style cylindric, 3—5.5 cm long; stigma 8—10-lobed, lobes yellowish, 8 mm long. Fruit cylindric to ovoid, 4—5.5 × 2.5—3.5 cm, somewhat violet or reddish, naked; pulp white or slightly reddish. Seeds 2 × 1.5 × 1 mm, covered with low and blunt tubercles, dull black.

Aruba, Bonaire, Curaçao, and Klein Bonaire.

Abundant; often a dominant feature in the landscape.

Vernacular names: kadoesjie, breebree (Leeward Group).

Uses: the wood is used for roofs and walls of houses; the fleshy tissue of the stem is used for preparing cadushi soup; moreover the plant is important as cattle-food.

Pereskia Miller, Gard. Dict. Abr. ed. 4. 1754

Leafy trees or shrubs with branches and leaves resembling common trees; spines in pairs or in clusters in the axils of the leaves, neither sheathed nor barbed; areoles nearly circular; glochids wanting. Leaves alternate, broad, flat, deciduous, sometimes fleshy. Inflorescence corymbose or consisting of terminal and axillary panicles or the flowers solitary. Flowers wheel-shaped, perigynous or epigynous, pedicellate. Stamens numerous. Style single; stigmalobes linear. Fruit mostly globose. Seeds black, glossy, with a brittle shell. Embryo strongly curved. Cotyledons leafy. Seedlings without spines.

About 15 species in tropical America; a number of species cultivated.

Key to the species:

1. Climbing vines; twigs with a short pair of reflexed spines from each areole; stem with acicular spines.....*P. aculeata*
Shrub or tree with slender straight spines..... 2
2. Petals yellow.....*P. guamacho*
Petals red or purplish.....*P. grandifolia*

Pereskia guamacho Weber

WEBER, in BOIS, Dict. Hort. 938. 1898; BRITTON & ROSE, Cactaceae 1: 16, figs 9, 10. 1919; ARNOLDO, Gekw. en nutt. pl. Ned. Ant. 104, fig. 165. 1954; Gekw. en nutt. pl. Ned. Ant. 122, fig. 170. 1971.

Shrub, up to 3 m high, very spiny, but often a tree up to 20 m tall; trunk up to 60 cm in diam.; areoles rather prominent, especially in age often standing out like small knobs on the branches filled with brown felt, at first usually with only 1 to 4 spines along with a few short accessory ones, but in age often with 20 spines or more; spines somewhat divaricate, rigid brown, the longer ones often 4 cm long. Leaves on young branches soli-

tary, on old wood growing in fascicles; blades elliptic, lanceolate to oval or obovate, acute at the apex, cuneate at the base, usually c. 3 cm long, but sometimes 5—9 cm long and 3—6 cm wide, fleshy. Flowers solitary but so thickly set along the branches as to appear almost spicate, sessile, bright yellow, 4—5 cm in diam. Stamens numerous. Ovary covered with small lanceolate-acuminate leaves, these hairy in the axils. Fruit globose, about 2 cm in diam., becoming naked, said to be orange-coloured and edible. Seeds back, flattened, 4 mm broad.

Venezuela and some islands off its coast.

Vernacular name: guamacho (Leeward Group).

***Pereskia aculeata* Mill.**

MILLER, Gard. Dict. ed. 8. 1768; GRISEBACH, Fl. Br. W. Ind. Isl. 303. 1860 ['1864']; DUSS, Fl. phan. Ant. franç. 319. 1897; BOLDINGH, Fl. D.W. Ind. Isl. 1: 142. 1909; Fl. Ned. W. Ind. Eil. 300. 1913; URBAN, Symb. Ant. 8: 468. 1920; FAWCETT & RENDLE, Fl. Jamaica 5 (3): 272, fig. 105. 1926; WILLIAMS, Fl. Trinidad & Tobago 1: 453. 1940; LEON & ALAIN, Fl. Cuba 3: 358, fig. 159. 1953; ARNOLDO, Gekw. en nutt. pl. Ned. Ant. 104, fig. 164. 1954; GOODING *et al.*, Fl. Barbados 303. 1965; ARNOLDO, Gekw. en nutt. pl. Ned. Ant. 122. 1971; ADAMS, Flowering plants of Jamaica 273. 1972; FOURNET, Fl. Guadeloupe & Martinique 1035. 1978; — *Pereskia pereskia* (LINNAEUS) KARSTEN, Deutsche Fl. 888. 1882; BRITTON & ROSE, Cactaceae 1: 10, plate II, figs 1, 2, 3. 1919; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 608. 1924; — *Cactus pereskia* LINNAEUS, Spec. Plant. 469. 1753.

Shrub, at first erect but the branches often long and clambering, 3—10 m long; spines in the lower part of the stem solitary or 2—3 together, slender and straight; spines in the axils of the leaves paired, rarely in threes, short, recurved. Leaves short-petiolate, blade lanceolate to oblong or ovate, short-acuminate at the apex, tapering or rounded at the base, up to 7 cm long. Inflorescence consisting of panicles or corymbs. Flowers white, pale, yellow or pinkish, 2.5—4.5 cm in diam. Ovary leafy and often spiny. Fruit light yellow, 1.5—2 cm in diam., quite smooth when mature. Seeds black, somewhat flattened, 4—5 mm in diam.

West Indies and along the east and north coasts of South America; also known from Florida and Mexico, but there perhaps only as an escape.

***Pereskia grandifolia* Haw.**

HAWORTH, Suppl. Plant. Succ. 85. 1819; DUSS, Fl. phan. Ant. franç. 319. 1897; BRITTON & ROSE, Cactaceae 1: 19, fig. 16, plate III, fig. 1. 1919; BRITTON & WILSON, Sci. Surv. Porto Rico & Virgin Isl. 5: 608. 1924; WILLIAMS, Fl. Trinidad & Tobago 1: 454. 1940; ADAMS, Flowering plants of Jamaica 273. 1972; FOURNET, Fl. Guadeloupe & Martinique 1035. 1978; — *Rhodocactus grandifolius* (HAWORTH) F. M. KNUTH, in BACKEBERG & KNUTH, Kaktus ABC 96. 1935; LEON & ALAIN, Fl. Cuba 3: 360. 1953.

Tree or shrub, 2—5 m tall, usually with a definite very spiny, woody trunk up to 10 cm in diam.; branches fleshy, glabrous, elongate, usually with 1 or 2 acicular spines at the areoles. Leaves oblong, obtuse or acute at the apex, somewhat narrowed at the base, 8—15 cm long; petioles short. Inflorescence small, terminal, usually consisting of few-

flowered cymes. Flowers 3.5—4(—6) cm in diam. Sepals green, to 20 × 5 mm, acute. Petals rose-coloured or sometimes white. Ovary leaf-bearing. Fruit 4 cm long, 3 cm in diam., pear-shaped, many-seeded. Seeds black, slightly flattened.

Brazil, widely planted and subspontaneous throughout the West Indies; the species is extensively used for hedges in tropical America.