

REDOUTÉ'S FAIREST FLOWERS



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Text by
MARTYN RIX AND
WILLIAM T. STEARN



The great plant illustrator, Pierre-Joseph Redouté (1759–1840), is best known to the general public for his exquisite *Roses*—reproductions of which are found in millions of homes all over the world—and to botanists for his more scientifically important *Liliacées*, (*Lilies*) that were commissioned by the Empress Josephine to record the flowers at Malmaison. Here for the first time, the artist's superb rare volume, *Choix des plus belles fleurs et des plus beaux fruits*, is reprinted in a single volume created from original engravings in the British Museum. Here is the lush, evocative color for which Redouté is known—a magnificent collection of plants, including not only roses and lilies but also lilacs, honeysuckle, peonies, camellias, pansies and dahlias, as well as a selection of equally opulent fruits. A descriptive text by botanical scholars William T. Stearn and Martyn Rix accompanies each illustration, tracing the origin and history of the plant and discussing its horticulture today. William Stearn's fascinating introduction to the life and work of Redouté—as well as Redouté's own preface to the original edition—creates a context for this enduring pleasure.

To Michelle,
With Compliments
from the Trader gallery
of San Francisco
best, Tam



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Introduction by
WILLIAM T. STEARN

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The plates in this edition have been reproduced from the original engravings in Redouté's *Choix des plus belles fleurs prises dans différentes familles du règne végétale et de quelques branches des plus beaux fruits groupée quelquefois et souvent animée par des insectes et des papillons*, first published in Paris in 1827–33. This is the first single-volume reprint since their original publication.

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In these editions, the plates are bound in largely alphabetical order; here the authors have substituted a botanical order which is also mainly seasonal.

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PIERRE-JOSEPH REDOUTÉ

Royal Flower Painter

WILLIAM T. STEARN



The *Choix des plus belles Fleurs* (1827–33) ranks among the most elegant of the later works of the artist Pierre-Joseph Redouté (1759–1840) although relatively little-known. For those to whom the name Redouté is little more than the name of a long-dead painter of flowers or is associated only with modern reproductions of his paintings of roses, the following biographical sketch may provide a wider view. He lived through turbulent periods, through the Reign of Terror during the French Revolution and the triumphs and disasters of the Napoleonic wars, through poverty, affluence and financial strain, but he never swerved from devotion to his art. A love of flowers and their portrayal as expressions of life began in his youth and lasted to the end; aged eighty-one he was painting a lily the day before he died. Of that industrious and productive life, *Choix des plus belles Fleurs*, being a selection of flowers depicted simply for their beauty and interest, provides a fitting memorial.

Redouté, who despite an uncouth appearance ‘counted all the prettiest women in Paris among his pupils’, achieved his lasting repute as a great botanical artist and flower painter within an outstanding period in the illustration of plants, one noted for the publication of sumptuously produced folio books with coloured plates. The period, as covered by Sacheverell Sitwell and others in their *Great Flower Books* (1956), stretches from 1700 to 1900 but its most floriferous years were those between the publication of C. D. Trew’s *Plantae selectae* (1750–53) with coloured engravings and J. D. Hooker’s *Illustrations of Himalayan Plants* (1855) with coloured lithographs. Redouté made his contribution to this ‘golden century’ between 1798 and 1837 with at least 2100 published plates of high artistic and botanical merit. Many of these appeared in such costly and prized works as *Plantarum Historia succulentarum* (1798–1837), *Les Liliacées* (1802–16), *Jardin de la Malmaison* (1803–5), *Les Roses* (1817–24) and *Choix des plus belles Fleurs* (1827–33). These have earned him enduring fame. He was far, however, from being eminent in a period of

mediocrity as were some of his predecessors. Redouté's contemporaries included some of the greatest botanical artists of all time: Martin Rössler (1727–82), Gerard van Spaendonck (1746–1822), James Sowerby (1759–1822), Franz Andreas Bauer (1758–1840), Ferdinand Lukas Bauer (1760–1826), Sydenham T. Edwards (1769?–1819) and Pierre J. F. Turpin (1775–1840). None of these, however much esteemed among connoisseurs of botanical art, ever came near to gaining in his lifetime or thereafter the popularity which rewarded the skill and industry of Redouté. His only rival for quantity of published botanical illustrations is the Kew artist Walter Hood Fitch (1812–92). Modern reproductions of plates from *Les Roses* have perpetuated Redouté's popularity.

Redouté's well-merited success was due both to his talent, which was more than matched by that of the two Austrian brother Franz and Ferdinand Bauer, and to circumstances particularly favourable for its development. He worked in Paris when it was the cultural and scientific centre of Europe. Although relatively uneducated, for he left home at the age of 13 to earn his living as an itinerant Belgian painter, he received friendship, instruction and encouragement by working with such eminent botanists as C. L. L'Héritier de Brutelle (1746–1800), R. L. Desfontaines (1750–1833), E. P. Ventenat (1757–1808) and Augustin-Pyramus de Candolle (1778–1841). He also had the patronage of the generous art-loving Empress Josephine. Moreover he lived at a time when a taste for grand books was spreading among the wealthy in Europe and so expanding the market for those about rare and beautiful plants such as he portrayed. These books provided a fitting setting for his skilfully reproduced plates. His living came from payment for commissioned illustrations, from the sale of his books and paintings, from a salary granted by the Empress Josephine and from fees for instructing aristocratic pupils in drawing and painting, much as his German predecessor Georg Dionys Ehret (1708–70) had done earlier in England. Genial, kind, sympathetic, patient and gentle, Redouté was remarkably successful as a teacher, humble though was his origin. 'What other painter', asked Franz Stafleu in 1963, 'can point to two queens, two empresses, and one other claimant to the throne of France as his pupils?' This was due to his charming personality, not to his far from charming appearance, for J. F. Grille described him as having 'a thick-set figure with elephantine limbs, a head as heavy and flat as a Dutch cheese, thick lips, dull voice, crooked fingers, an unattractive aspect'. His hands were like those of a blacksmith or stone-mason. A close friend, Jules Janin, said 'he composed a bouquet with the intelligence and the happiness of a young girl at her first ball; and yet he brought about those delicate masterpieces with the thick hands which resembled the feet of some prehistoric animal'.

In his later years Redouté, who had earlier been so generous to others in distress, became financially embarrassed, admittedly through excessive

expenditure. Most of his celebrated work had been associated with descriptive text by distinguished botanists. He now tried to relieve his difficulties by publications valuable only for their elegance. The *Choix des plus belles Fleurs* is the most pleasing of these; it does not set out to give botanical details, although always true to nature; it gives no instruction apart from what can be gained from studying an accurate presentation and Redouté did indeed hope it would provide students with models; the intent is purely aesthetic, like that of the old Dutch flowerpieces, and fortunately Redouté here maintained much of the quality of his years of triumph.

ARTISTIC BACKGROUND

Inherited artistic ability going back at least to his great-grandfather and his grandfather Jean-Jacques Redouté (1687–1752) of Dinant, together with a dedication to craftsmanship and hard work, would have provided Pierre-Joseph Redouté with a living and possibly local but ephemeral renown as an interior decorator and designer of stage scenery, like his elder brother Antoine-Ferdinand Redouté (1756–1809), had not a stay in Holland as a wandering teenage painter directed him towards the painting of flowers. This became his life-long passion. His parents lived at St Hubert in the Ardennes, then part of the duchy of Luxembourg but now in Belgium outside the territory of the present Grand Duchy of Luxembourg, and here he was born on 10 July 1759. His father Charles-Joseph Redouté (1715–76), who had trained as a painter in Paris, earned a modest livelihood as a decorator at the nearby abbey of St Hubert and houses belonging to wealthy people. For tax purposes his worldly goods were assessed in 1772 as a small third-class house in the Rue du Four (now Rue Redouté), a small garden and three goats. The house existed until December 1944 when it was destroyed in the heavy fighting of the unsuccessful German counter-offensive against the Allies in the Ardennes. Here Charles-Joseph and his wife Marguerite-Josèphe raised their three boys, Antoine, Pierre and Henri, and two girls, Jeanne and Anne-Marie. He trained the boys as painters and interior decorators; probably his wife trained the girls to be good housewives. Pierre-Joseph, wandering in the woods of the Ardennes, came to love their wild flowers; the delicate beauty in particular of *Trientalis europaea*, which he was the first to notice in Belgium, remained fixed in his memory.

At the age of 13, Pierre-Joseph left home, studied painting in Liège, then spent several years in Luxembourg, Flanders and Holland, doing interior decoration and painting religious pictures and portraits. During these wanderings he became acquainted with the works of the Dutch flower painters,

notably Rachel Ruysch and Jan van Huysum, and his admiration of their luxuriant masterpieces profoundly influenced his career, ultimately turning him from interior decoration and portraiture to the illustration of flowers with a skill and love matching theirs.

In his essay of 1941 on 'Dutch civilisation in the seventeenth century' the great Dutch historian Johan Huizinga (1872–1945) stated that 'its painting had its *raison d'être* in the wealth and vitality of well-to-do burghers; among them it found its inspiration, protectors and patrons. There were no Maecenas, mark you; instead there was a vast number of art lovers. Paintings were everywhere: in the town hall and other public places, in orphanages and offices, in the houses of patricians and burghers alike – in brief, everywhere except in the churches.' Another writer on life in seventeenth-century Holland, Paul Zumthor, has noted that 'until about 1660 the most modest shopkeeper had his collection of pictures and hung them in every room. Peasants were known to pay as much as two or three thousand florins for a painting, and yet none of these people had the least idea of being patrons of the arts ... In the eyes of the aristocracy and the wealthy bourgeoisie the painter was a supplier of goods like any other. They were not interested in becoming patrons; they simply commissioned a work and paid for it. ... The artist's own taste was largely determined by the prevailing taste of his fellow countrymen, who loved harmony of design and richness of colour and abhorred sentimentality and mysticism.' This attitude existed when Redouté worked in the Netherlands. There was thus a homeliness about Dutch art as regards its subjects, associated with an especial quality of precise expression. The buyers of pictures appreciated above all portraits of themselves and their environment, the unsensational low-lying countryside with its village scenes, cattle and peasants, municipal buildings and streets, domestic interiors, rowdy taverns and exotic flowers, of which a large number had come into Dutch gardens since 1560, particularly from the Near East, the home of tulips, narcissi, anemones, turban ranunculi, lilies, hyacinths etc. From about 1600 onwards the painters interested in these portrayed them individually with meticulous accuracy; they covered their canvasses with representations of gorgeous bouquets, crowding together into one many-coloured diversified group the flowers of different seasons. The symbolism which had influenced the choice of the few flowers portrayed in the marginal decorations of medieval books of hours, e.g. the columbine for the Holy Ghost, the daisy for innocence, the violet for humility, the heartsease for the Trinity, the white lily and the white rose for purity, the red rose for martyrdom, and which has been discussed by Behling, Haig and Wolffhardt, had no place in this luxuriant secular art. Aesthetic effect alone mattered.

The painters of such flower-pieces, among them Jan Bruegel the elder

(1568–1625), J. D. de Heem (1606–84), Rachel Ruysch (1664–1736), Jan van Huysum (1682–1749) and Pieter Casteels (1684–1749), in all depicted not more than 60 species in their compositions: Admiring and emulating their work, Redouté became an heir to the great Dutch tradition of flower painting. Unlike his predecessors he ranged so widely over the plant world as to portray at least 1800 species as well as many garden forms, and these not as grouped flowers but as individuals displaying their particular characteristics. Thereby he made an important contribution to taxonomic botany for he recorded graphically many species new to science.

EARLY YEARS IN PARIS, 1782–1788

Meanwhile Redouté's elder brother Antoine-Ferdinand Redouté (1756–1809) had established himself in Paris as an interior decorator and a designer of scenery for the Théâtre Italien, and Redouté, now aged 23, joined him here in 1782. He continued, obviously at first as a side activity, the painting of flowers and he sold some of his paintings to a Paris art dealer, Cheveau. He also learned the technique of engraving and colour printing in the workshop of Gilles-Antoine de Marteau, born in Liège and thus a fellow countryman. The royal Paris botanic garden, the *Jardin du Roi*, like the royal garden at Kew, had become well stocked with plants from many countries. Their beauty and diversity enticed Redouté more and more to spend his leisure in the botanic garden painting them, in Antoine's eyes a pleasing but doubtfully profitable exercise. Cheveau, however, had had Redouté's illustrations engraved by de Marteau and these brought him to the notice of two influential men, the artist Gerard van Spaendonck (1746–1822) and the botanist and book-lover Charles-Louis L'Héritier de Brutelle (1746–1800). They at once recognized the unknown young artist's talent as a botanical illustrator. Together they gave him the opportunity to devote his life to portraying plants.

L'Héritier had an important part in Redouté's advancement. He belonged to a wealthy aristocratic French family and in those days of the Ancien Régime in France, where family standing often mattered more than knowledge and ability, he was appointed in 1772 superintendent of water and woods of the Paris region. This stimulated him to remedy his ignorance of trees and forestry by study, notably of the botanical works, *Genera Plantarum*, *Species Plantarum*, etc., of the Swedish naturalist Carl Linnaeus. Thereby, he became an enthusiastic botanist with the tenacity and zeal of the self-taught. In 1775 he was appointed a magistrate at the *Cour des Aides*, a Paris law-court concerned with indirect taxation. According to Stafleu, this position 'labelled L'Héritier as belonging to that small, socially progressive group of influential magistrates

that did so much to prepare the way for the revolution that was to come'. The *Cour des Aides* had a high reputation for justice and probity, amid injustice and corruption everywhere. L'Héritier's own reputation as a just and honest man concerned with social reform may have helped to save him from the guillotine during the Reign of Terror in 1793 and 1794, when other public-spirited men such as Malesherbes and Lavoisier were executed, but even so, according to de Candolle, he was imprisoned and came near to execution.

In March 1795 L'Héritier began the publication in instalments of a work with descriptions and illustrations of little-known plants entitled *Stirpes novae*, with eleven plates by L. Frevet, L. Fossier and B.L. Prévost. He evidently thought he needed yet another artist for this work and offered Redouté employment, instructing him in the botanical details necessary, as Trew some fifty years earlier had instructed Ehret. The second instalment of the *Stirpes novae* published in December 1785 or 1786 contained three plates by Redouté; thus began Redouté's illustrious career in botanical illustration. L'Héritier was murdered on 16 August 1800 when returning home, almost on his own doorstep, to the sadness not only of Redouté but of his many distinguished friends, among them Georges Cuvier. Redouté treasured the memory of this good friend and patron and declared in 1817 that he owed his new career and the possibility of developing his talents to L'Héritier. Although L'Héritier's publications remain important, this was undoubtedly his greatest service to botany.

VISIT TO ENGLAND

In September 1788 L'Héritier made a precipitate visit to England, taking with him the collection of dried plants gathered in Peru and Chile by Joseph Dombey (1742–94), a most unfortunate and ill-treated botanist, in association with the Spanish botanists Ruiz and Pavon. Dombey's salary had been paid by the French government but the Spanish government claimed a right to the material he took to France and which L'Héritier had been granted the opportunity to study and publish. The Spanish government accordingly put pressure on the French government to stop L'Héritier doing so. Learning of this, L'Héritier, with the help of Redouté and another friend, P. A. M. Broussonet, packed the Dombey collection overnight and next day he dashed with it to England where this material would be out of Spanish and French reach and where he could study it in the rich library and herbarium of Sir Joseph Banks at Soho Square, London. A detailed account of the Dombey affair and its repercussions will be found in *Flowers for the King* (1964) by A. R. Steele. L'Héritier had intended only a short stay in England but extended this to

fifteen months and spent most of his time studying not Dombey's plants but the new or little-known species cultivated in the London area. He decided to publish illustrations of these, but for this project he needed artists. In England he had found a promising artist in James Sowerby (1757–1822), later celebrated above all for providing the illustrations to Sowerby and Smith's *English Botany*, (1790–1814), and in April 1787 he asked Redouté to join him. The result was his *Sertum Anglicum* (1788), with 22 plates by Redouté and 13 by Sowerby, intended as a tribute to the English nation in gratitude for courteous and hospitable treatment received in England. Here seven of his thirteen new genera are dedicated to British botanists: *Boltonia*, *Dicksonia*, *Lightfootia*, *Pitcairnia*, *Relhania*, *Stokesia* and *Witheringia*. For Redouté, apart from the joy of seeing the royal garden at Kew and illustrating its plants, the maximum profit of this visit may have come from acquaintance with the engraver Francesco Bartolozzi and his use of stipple engraving, of which he later learned more from van Spaendonck. This form of etching consists of using dots variously spaced and together with lines, in hands as skilled as Redouté's, produced graduations of tone less harsh and dark than those resulting from massed lines alone. The various colours were carefully put on to the single etched plate. Redouté used this method of colour printing very successfully, touching up special copies by hand.

MIDDLE YEARS 1788–1816

Returned to France, Redouté continued to work for L'Héritier but was commissioned by van Spaendonck to contribute some coloured drawings of plants to the royal *collection des vélins* of which van Spaendonck had charge as 'Professeur de peinteur de fleurs'. This huge collection of paintings on vellum had been started by Gaston d'Orléans (1608–60), brother of the King of France, Louis XIII; it passed after his death to King Louis XIV, and was continuously enriched thereafter by additional paintings, which from 1784 were in water-colour, not gouache as earlier. Redouté also had the privilege of painting flowers in the Petit Trianon garden of Queen Marie-Antoinette and in due course received appointment as her official artist. It was short-lived. He had risen in a social world doomed to collapse a few years later in the turbulence of the French Revolution, with the Queen herself, head shorn and hands tied, ignominiously taken through the streets of Paris in a dung cart to die on the guillotine in 1793. She counted little among the 40,000 or so French citizens executed during Robespierre's Reign of Terror. These were indeed times of danger and difficulty. Redouté's generous friend L'Héritier lost his wealth but somehow Redouté and his younger brother Henri-Joseph continued to paint

and were officially appointed to provide more illustrations for the *vélins*, now national property and transferred to the Muséum National d'Histoire Naturelle as the Jardin du Roi had now become; he also drew the illustrations reproduced as black and white line engravings for Desfontaines' *Flora Atlantica* (1798–99) dealing with plants of Algeria and Tunisia. After the Terror had ended and Robespierre its fanatical exponent had himself been executed, came the Directory lasting from 1795 to 1799; the military successes of Napoleon Bonaparte took him to supreme power, as First Consul in 1799 and Emperor in 1804. During this period Redouté's reputation grew steadily and he became associated with one important work after another as sole or primary illustrator, these being published over a period of years, so that he was engaged at the same time on more than one. Thus at the instigation of L'Héritier he had begun before 1798 to paint succulent plants whenever they came into flower; portrayal of their solid three-dimensional shapes, often associated with surprisingly beautiful flowers, challenged his artistic skill, as pressed and dried specimens by themselves were almost useless for study, having lost so many characteristics evident when living. For publication these illustrations needed a descriptive text: his friends L'Héritier and Desfontaines persuaded a young botanist from Geneva, Augustin-Pyramus de Candolle (1778–1841), not yet renowned, to undertake this. Between 1798 and 1805 the publication in 28 parts of the joint *Plantarum Historia succulentarum, Histoire des Plantes grasses* firmly established the reputations of both artist and author. A quarrel between de Candolle and the publisher Garnery then brought the work to an end, although Redouté naturally wanted its continuation, which was resumed from 1829 to 1837 with text by another botanist, J.B. Antoine Guillemain (1796–1842). He later provided some text for Redouté's *Choix des plus belles Fleurs*. Redouté had also become interested in petaloid monocotyledons, in Liliaceae, Amaryllidaceae, Iridaceae, Orchidaceae and related plants, which for him were 'Liliacées'. De Candolle again undertook to write the accompanying botanical text and prepared that for volumes 1–4 (1802–8) of *Les Liliacées* which began publication in parts in 1802; he had, however, to relinquish his task on his appointment in 1808, following Broussonet's death in 1807, as professor of botany in Montpellier, a position held until 1816, when he returned to his native Geneva. Another botanist, François Delaroche (1780–1813), prepared text for volumes 5 and 6 (1809–12) and probably all of volume 7 (1812–13), thus enabling publication of this grand work to continue, but he died prematurely. In this emergency yet another botanist, Alire Raffeneau Delile (1778–1850), came to Redouté's aid and provided text for volume 8 (1814–16), the final volume.

ASSOCIATION WITH THE EMPRESS JOSEPHINE

The most flourishing period of Redouté's life came through association with the Empress Josephine (1763–1814), the daughter of a sugar-planter on the West Indian island of Martinique and named at birth Marie-Joseph-Rose Tascher de la Pagerie, whence the name *Lapageria rosea* honouring her and not the imaginary 'French botanist Lapage' to whom Sachaverell Sitwell attributed its discovery. The later name *Josephinia imperatricis* refers to her later glory. A fortune-telling negress is reputed to have foretold that she and her playmate and distant cousin Aimé Dubuc de Rivery would become queens, a most improbable future for the two creole girls on so remote a tropical island, beautiful though they both were. As Nigella Lawson has written, 'Beauty is supposed to yield power, but power is necessarily active and beauty, however exalted, is supremely passive, relying on the reactions of others.' Both girls, however, had the intelligence to use their good looks astutely. Aimé, captured by Barbary pirates on a voyage from France to Martinique, so impressed them by her beauty that they sent her as a special gift to the Sultan of Turkey and she so impressed him that out of all his concubines she rose to be the Sultana and the mother of Sultan Mahmud II, as related in Lesley Blanch's *The wilder Shores of Love* (1954). Josephine, aged sixteen, reached France safely in 1779 to marry the *vicomte* Alexandre-François-Marie de Beauharnais. She bore him two children, Eugène (later Duke of Leuchtenberg) in 1781 and Hortense (later Queen of Holland) in 1783, but they legally separated in 1785. However, during the Paris Reign of Terror of 1793 and 1794, 'the archetype of revolutionary slaughters', they were both imprisoned in the same dark, crowded, damp, verminous and stinking prison for more than three months. Aimé in faraway Constantinople, a different kind of prisoner, was then enjoying the luxury, enduring the boredom and surviving the intrigues of a Turkish harem. A patriotic republican soldier, Beauharnais was nevertheless guillotined as an aristocrat; only the execution of Robespierre a few days later by revolutionaries, who feared he would execute them too, saved Josephine from a like death. But for that the career of Redouté would undoubtedly have been different, his achievements much less, his repute undistinguished. For both him and Josephine their escape, in very different ways, from penury was crucial.

In 1795 the leading republican Paul Barras, who had Josephine as a mistress, ordered the rising young Corsican soldier Napoleon Bonaparte, an artillery expert, to deal with a violently demonstrating mob. Napoleon did this quickly and efficiently; his cannonades caused more than two hundred casualties and the demonstrators gave the government no further trouble. 'All is quiet', wrote Napoleon, as well it would be after that, and on the orders of

Barras he supervised the surrender of unauthorized weapons. At Josephine's house her son Eugène, aged fourteen, refused at first to give up his father's sword; for him it was a matter of honour, his father having been a general of the republic; Napoleon agreed, and returned the sword, not knowing that this spirited boy would later become his most loyal commander. A few days later, Josephine, now *citoyenne* Beauharnais, no longer *vicomtesse*, called on Napoleon to thank him for his courtesy, obviously employing her charm. He fell passionately in love with her. On 9 March 1796, they were married, amid hectic preparations for Napoleon's Italian campaign, but so humbly that the mayor's room was lit by only one candle. Not until 1799, by which time Napoleon had conquered Italy, invaded Egypt and become First Consul, did Josephine acquire the dilapidated and neglected estate of Malmaison, then near Paris, now engulfed by it. Sparing no expense she renovated and elegantly furnished the chateau, overhauled and replanted the garden, and in 1805 had a vast hothouse built with sloping glass roofs for the cultivation of tropical plants. They must have recalled the vegetation of Martinique. Together with her outdoor plants they provided Redouté with endless subjects for painting; thus she had 250 kinds of roses. At her death the Malmaison estate comprised 726 hectares including a menagerie, for she loved animals as well as plants.

Sometime before 1800 Redouté had painted new and little-known plants grown in the garden of Jacques-Martin Cels (1757–1808), a friend of L'Héritier. These illustrations were, along with others by his brother Henri-Joseph Redouté, Marèche, Sauvage and Cloquot, published in ten parts between 1800 and 1802 as *Description des Plantes nouvelles et peu connues cultivées dans le Jardin de J. M. Cels*, with descriptions by Étienne-Pierre Ventenat (1757–1808), likewise a close friend of L'Héritier. Ventenat went to England in 1788 to buy books. On the return voyage the ship sank during a violent storm and all aboard were drowned except Ventenat, evidently a strong swimmer, who managed to grasp a roped barrel and was rescued at Calais. He had studied botany under Antoine L. de Jussieu. Josephine paid him handsomely to study the plants at Malmaison and he introduced Redouté to her as a botanical artist.

In 1799 Napoleon had become First Consul of France, virtually a king, then in 1804 Emperor of the French, and Josephine his Empress. Stafleu has concisely sketched her character: 'charming and engaging, kind-hearted, frivolous and even flippant, not brilliantly intelligent but rather emotional and extravagant with money, but also generous, artistic and above all endowed with a great aesthetic sense'. Lavishly spending Napoleon's money she became a liberal patron of the arts and particularly of Redouté. Both had travelled to the top in the social scale, she from an unpromising girlhood in Martinique and from the terrible imprisonment during which she daily awaited death, he

from the poverty of his youth and wanderings as an itinerant painter. Under her auspices, supported by her money, and working among her plants he produced his most sumptuous works, *Jardin de la Malmaison* (2 volumes, 1803–5) with text by Ventenat, *Les Liliacées* (8 volumes, 1802–16) described above, *Description des Plantes rares cultivées à Malmaison* (1812–17) with text by Aimé-Jacques Goujard Bonpland (1773–1858), who had been the companion of Alexander von Humboldt in exploring southern South America and Central America, and *Les Roses* (3 volumes, 1817–24) with text by Claude-Antoine Thory (1759–1827). Now at the height of his powers Redouté portrayed in these works species from places as far distant as Japan, South Africa and Australia as well as from Europe and America. A large number of Australian plants were then grown in England, especially in the well-stocked Vineyard Nursery of Lee and Kennedy at Hammersmith, now part of London; in one year Josephine bought plants from them at the astounding cost of £2,600 and, despite the Napoleonic Wars, the gardener John Kennedy (1759–1842) was able to come and go as he pleased. Ventenat named the Australian genus *Kennedia* in his honour.

Redouté's salaried appointment as painter to Josephine enabled him to buy a big country house with orangery and garden at Fleury-sous-Meudon as well as maintain his Paris flat, much to the joy of his wife and two daughters. During years of neglect the garden had become a wilderness, the buildings derelict, but Redouté saw their potentialities. Here would be ample space for his beloved roses and other plants.

Although Josephine had had two children by her first husband, the executed Beauharnais, she failed to give Napoleon the heir they both ardently wanted and for him the matter was urgent. Long negotiations, sorrowful for them both, ended with an annulment of their marriage on 15 December 1809, leaving Napoleon free to undertake another marriage which might be more fruitful. Three months later he married the eighteen-year-old daughter of the Austrian Emperor, the Archduchess Marie Louise; in 1811 she duly produced a son. Meanwhile Josephine returned to Malmaison, but this in Napoleon's view was inconveniently close to Paris and his new Empress; he accordingly presented her with the chateau and estate of Navarre, near Évreux, Seine Maritime and an impressive income. Initially Josephine found this a dismal change from luxurious Malmaison but ultimately the charm of its garden architecture and planting reconciled her to exile. Here Redouté found yet more flowers to be painted and described for Bonpland's book.

Redouté's fortunes had been bound with those of his warm-hearted art-loving patroness and hers with those of Napoleon. Napoleon's disastrous campaign against Russia in 1812 and the coalition against him in 1813 and 1814, which defeated his armies and invaded France, led to his abdication in

1814. Josephine had an assured income, though less than formerly, but she became ill and on 29 May 1814 she died at Malmaison. She had been a very extravagant woman yet through sponsoring Redouté's work she enriched the world.

LATER YEARS

Deprived of Josephine's patronage, Redouté's income fell drastically; he had to borrow money which he could not pay back. Gerard van Spaendonck died in 1822 and Redouté became one of two masters of design appointed to replace him at the Muséum d'Histoire Naturelle. In 1825 the Bourbon King of France, Charles X, appointed him a Chevalier of the Légion d'Honneur. The publications which had brought him renown had been primarily botanical. Now, as a way out of his financial difficulties, he began to publish works which were primarily aesthetic. The first and most celebrated of these was *Choix des plus belles Fleurs et des plus belles Fruits*, with 144 unnumbered plates, published in parts between 1827 and 1833. Earlier he had been his own publisher, but now he evidently lacked the capital for such undertakings. At Fleury-sous-Meudon he had as a neighbour Charles-Louis Panckoucke (1780-1844), a leading Paris publisher, the son of Charles-Joseph Panckoucke (1736-98), who, like Redouté, had come from Belgium. Thus, through this association the firm of Panckoucke, now in the hands of Ernest Panckoucke, came to publish the *Choix des plus belles Fleurs*. It depicts various flowers and fruit which Redouté had painted without any aim but aesthetic effect and it maintains the high standard of his earlier work.

In 1830 the reactionary acts of Charles X led to his overthrow and the election of Louis Philippe as king. His queen, Marie-Amélie (1782-1851), being interested in flower painting, appointed Redouté 'Peintre de Fleurs du Cabinet de la Reine' and gave him financial help. This he certainly needed. He had produced several works, e.g. *Album de Redouté* (1824) with plates taken from his earlier works, but his income failed to meet the expenses of his flat and his estate and the interest on borrowed money. On 19 June 1840 he sat down to paint a lily. A cerebral haemorrhage cut short his task and next day he died. During his eighty-one years he had risen to international fame by quietly producing pictures of plants, which by their freshness and their truthful rendering of beauty are of timeless appeal to all who love flowers as he did so wholeheartedly. In the seventeenth century the French princess Henrietta Maria on marrying King Charles I of England became known as the 'Rose and Lily Queen'. Had Redouté ever wished such a commemorative designation, as the artist of *Les Roses* and *Les Liliacées* he might well have chosen 'Painter of Roses and Lilies' and there could hardly be one more fitting.

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PREFACE

by
P.-J. REDOUTÉ



Illustration of the plant kingdom, or the art of painting plants, to which I have devoted my studies and my life's labours, which has brought me success commensurate with my works, and whose principles I like to demonstrate in the practical course which I give each year at the Muséum du Jardin du Roi, is no less useful than it is pleasurable. The illustration of flowers presents agreeable pictures to admirers of nature and images to which it may please ladies to be compared; it also offers charming and valuable models to manufacturers who take advantage of it to enrich their wares, to principals of institutions interested in promoting the progress of their pupils in the art of design, and even to teachers dedicated to instruction in flower painting.

Plant illustration, so desirable moreover for the study of botany, gracefully embellishes the finest products of industry, sometimes bedecks winter with the finery of spring, and charms the leisure hours of those whose magical paintbrushes give lasting existence to the ephemeral gifts of Flora.

Being constantly engaged in encouraging the numerous students and teachers who enthusiastically follow my course in illustration, I came to believe that this course required new models which would help them avoid their commonest faults: inexactitude, stiffness, monotony. The models that will be found in this work have been faithfully and with great care portrayed from nature, so that the pupil who copies them during winter will be able, on the return of spring, to compare them with the flowers it brings to rebirth, without fear of having been misled. Enlightened by experience, encouraged by the very flattering approval of naturalists and painters both in my own country and in far distant lands, it is by giving myself up to the most thorough botanical study, I believe, that through ceaseless observation of nature in its constancy and variety of forms and colours I have attained success in the threefold relationship of accuracy, composition and colour that can alone bring plant drawing to perfection.

It is to be regretted that excellent works on particular aspects essential for painting do not give any instruction on this genre, which is today attaining such a degree of perfection that illustrations published in France are eagerly sought for abroad. This enthusiasm is all the more lively in that the natural sciences seem, nowadays, to have put themselves ahead of all the other sciences.

The art of painting flowers is not a luxury art, and the ornaments that luxury takes from it cannot detract from its unquestionable usefulness. Natural history would be at a loss if deprived of its assistance, especially at this time. The stupendous quantity of plants, the rarities in our conservatories, the new plants acquired and brought back by travellers, the variety of fruits cultivated with the utmost care, the wonderful richness of our outdoor flowerbeds, all offer so many choices to the artist whose faithful brush yearns to reproduce some part of these marvellous pictures of nature! And illustrations of the plant kingdom, captivating the eye of the amateur who is a complete stranger to natural sciences, guiding him from admiration of their portrayal to contemplation of the plants themselves, from love of art to study of nature – how greatly have these masterpieces increased the number of lovers of botany!

Such are the considerations that have made me decide to compose and publish this work, to which I have given complete personal attention. I therefore here dedicate my pictures to disciples of botany, to emulators in industry, to friends of the arts, to admirers of nature and to students who have devoted themselves to the study of an art that my illustrious predecessor van Spaendonck advanced so far, and to which I have given all my love in return for some degree of fame.

Translated by Eldwyth Ruth Stearn

THE PLATES



Camellia japonica, *Narcissus tazetta* and *Viola tricolor*

A bunch of Camellias, Narcissus and pansies. For details see pages 58, 128, 148.

PLATE I labelled *Bouquets de Camélias, Narcisses et Pensées*



Bouquet de Camélias Narcissés et Pensées.

Plates 2, 3 and 4 show different varieties of the common hyacinth, much loved in Redouté's day and still grown for its sweetly scented flowers which, with the right treatment, can be made to open at Christmas. They were never so popular as in the late eighteenth century when over 2,000 varieties were known by name in Haarlem, and it is in Holland that hyacinths are still grown and exported in large numbers.

Hyacinths are natives of southern Asia Minor and west Syria, and were much prized by the Turks. In the wild their flowers are usually pale blue to violet blue but under cultivation they have developed a much greater range of colour, including pinks, reds, purples and yellows. They came into the gardens of central and western Europe together with tulips and other plants of the Near East from about 1560 onwards, probably through the Flemish diplomat and scholar Ogier Ghiselin de Busbecq (1522–92) who as the ambassador of the Holy Roman Emperor, Ferdinand I, to the Sultan, Suleiman the Magnificent, at Constantinople from 1556–62, observed the richness of the Turkish garden flora. Clusius (Charles de l'Ecluse), an outstanding botanist, became acquainted with hyacinths introduced from Constantinople and later took them and other bulbs to Holland when appointed a professor at Leiden. Thus was born the Dutch bulb industry, which is still the foremost in the world.



Jacinthe d'Orient.

P. J. Redouté

Hyacinthus Orientalis

Chapuy.

The origin of the Latin name *Hyacinthus*, Greek *Huakinthos*, evidently goes back more than 4,000 years and is believed to be the name of a god in the lost Mediterranean language, 'thraco-pelasgian', spoken by the people inhabiting Greece before the ancestors of the ancient Greeks wandered there from the north. Scholars believe that Greek words with the element *-nth*, e.g. *minthe*, 'mint' and the termination *-inthos*, e.g. *Korinthos*, Corinth, *laburinthos* 'labyrinth', *terebinthos*, 'turpentine', and *Huakinthos*, 'Hyacinthus' derive from this absorbed pre-Greek language. The worship of Hyacinthus became mingled with that of Apollo. According to Greek mythology, Hyacinthus was a beautiful youth beloved by Apollo, who accidentally killed him. Where his blood fell there sprang up a purple flower marked with the Greek letters of lament ΑΙΑΙ meaning 'alas, alas'. This inscribed flower has been identified as *Gladiolus italicus*. In the sixteenth century the name *Hyacinthus* was applied to a number of petaloid monocotyledons, among them the English bluebell (now *Hyacinthoides nonscripta*) which having no writing on the flower was called *Hyacinthus non scriptus* by Dodoens. Of the twelve species included by Linnaeus in *Hyacinthus* in 1753 only *H. orientalis* now remains there; the others have gone to *Hyacinthoides* (*Endymion*), *Dipcadi*, *Brimeura*, *Muscari*, *Lanaria* and *Lachenalia*.

PLATE 3 labelled
Jacinthe d'orient variété rose

Hyacinthus orientalis



Lacinthe d'orient variété rose.

P. J. Redouté

Hyacinthus orientalis.

Bessin

Hyacinthus orientalis Linnaeus

Liliaceae

For details of the common hyacinth and the derivation of the name, see plates 2 and 3.

PLATE 4 labelled *Jacinte d'Orient Variété bleue*



Lucinde d'Orient Variété bleue

Tulips were introduced from Turkey into the gardens of central and western Europe in the sixteenth century, along with hyacinths, anemones and crown imperials. The epithet *gesneriana* commemorates Conrad Gessner (1516–65), a many-sided extremely industrious linguistic scholar, physician, zoologist and botanist who in 1561 published the first scientific description and figure of a tulip which he had seen in an Augsburg garden in 1559. The next illustration was published by Mattioli in 1565.

There were a number of introductions of tulips from Constantinople during the second half of the sixteenth century; Clusius in 1601 illustrated seventeen and raising of seedlings in Holland produced many more, leading to the financial speculation there between 1623 and 1637. Fantastic prices were then paid for bulbs. The lasting result was the Dutch bulb trade.

The native distribution of *Tulipa gesneriana* is unknown, as it is usually found as a weed of cultivated land, but it was probably somewhere in eastern Turkey or Central Asia. By the end of the eighteenth century several similar forms had become naturalized in northern Italy, particularly near Florence and Bologna, and in Savoy, particularly near Sainte Jean-de-Maurienne and were described as species new to science under such names as *T.bilietiana*, *T.bonarotiana*, *T.didieri*, *T.etrusca*, *T.lurida*, *T.mauritiana*, *T.neglecta*, *T.serotina*, *T.strangulata*, *T.variopicta* etc. Emile Levier (1838–1912), a Swiss doctor resident in Florence, published in 1884 a detailed study of these which he called the Neo-Tulips.

The flowers illustrated here have the sharp-pointed petals (tepals) characteristic of the first introduced tulips.

PLATE 5 labelled *Tulipe de Gesner*

Tulipe Gesneriana



Tulipe de Gesner

P. A. Redoute.

Tulipa Gesneriana.

Langlois.

Tulipa gesneriana Linnaeus

Liliaceae

The streaking, breaking or flaring and feathering, as it is called, on this tulip is caused by an infection by Tulip-breaking virus. The striking colour contrasts, and the unpredictability of their appearance, since nothing was known before 1920 of virus infection in tulips and its transmission by aphides, made them much sought after, and in Holland in the seventeenth century financial speculation in tulips reached such a height that it became known as 'Tulipomania'. Paintings of these 'broken' tulips can be found dating from around 1630, and bulbs are sold even today as 'Rembrandt Tulips'. There is even a society in Yorkshire, The Wakefield Tulip Society, devoted to their culture.

PLATE 6 labelled *Tulipe cultivée (variété)* *Tulipa culta* (Var.)



Tulipe cultivée (Variété)

Tulipa culta var.

The Madonna lily is a native of the eastern Mediterranean region from Greece and Turkey southwards to Palestine. It has been cultivated for well over three thousand years; good representations of it can be seen in the Middle Minoan III frescoes (c. 1750–1600 BC) of Knossos in Crete. Dioscorides in the first century AD attributed to it many medicinal virtues: the bulb is highly mucilaginous and boiled in water or roasted and beaten into an ointment was used as a poultice or dressing. In monastic gardens it was esteemed both for its beauty and medicinal use.

The pure white flowers are sweetly scented, and open in May and June. It grows best in a climate which has mild winters with little frost, as the lowest leaves appear in autumn. It needs a sunny site, in rich, well-drained limy soil, with the result that the best specimens can often be seen in cottage gardens, rather than in the great collections of lilies.

Lilium candidum is now rare in the wild, but I (M. R.) have seen it growing on dry, limestone cliffs near the ancient city of Cnidos in south-west Turkey, and it is also reported from the Epirus mountains and from Macedonia in northern Greece.



Lil. L^{is} flamm.

Lilium candidum.

* * * Redouté del.

Victor

The Crown Imperial, its name a translation of the Latin *Corona imperialis*, is probably the most spectacular and frequently grown of all the fritillaries, and the longest cultivated. It was introduced into Europe in about 1570, and is thought to have reached England via Constantinople and Vienna. Clusius published a very detailed illustrated account in his *Rariorum Plantarum Historia* (1601) under the name *Tusai sive Lilium Persicum* and there recorded that he grew it in 1580 in his little garden in Vienna, the bulbs having come earlier from Constantinople. In 1580 on a visit to London he also saw it in the garden of James Garret the younger, an apothecary and perfumer. It evidently quickly became widely distributed in European gardens. This form had orange flowers. He noted that its foetid smell was almost goat-like; Sir Thomas Hanmer later more aptly described the bulbs as smelling 'strongly like a fox'. Parkinson esteemed it so highly that he gave it pride of place in his *Paradisus* (1629): 'The Crowne Imperiall for his stately beautifullness, deserveth the first place in this our Garden of delight!'

Like the Madonna lily, the Crown Imperial has been cultivated in the Near East over a long period, so its range as a native plant is in some doubt. At present it is found wild from southern Turkey eastwards to Kashmir; it usually grows on cliffs and rocky slopes, often among scrub. According to tradition, a legend probably of Victorian invention, of all the flowers at the foot of the Cross only the proud Crown Imperial refused to hang its head. Its flowers have hung down and wept (referring to the drop of nectar at the base of each petal) in repentance ever since. The Persian name – *ashk-e Maryan* (tears of Mary) – is also associated with the Crucifixion.

F. imperialis has all the features of a typical bird-pollinated flower, but at present its range does not overlap with that of any species of sunbird. There is, however, one sunbird whose range extends at present into Jordan, and it is very possible that it occurred further north in the past.

PLATE 8 labelled *Fritillaire Impériale*



Fritillaria Imperiale

P. J. Redouté.

Fritillaria imperialis var. *lutea*

Liliaceae

Many different cultivars of *F.imperialis* were grown in the past, but few seem to have survived. At one time, apart from red, orange and yellow-flowered forms, 'Crown-upon-Crown' with several whorls of flowers, 'Foliis argenteo-vittatis' and 'Foliis aureo-vittatis' with striped leaves, as well as double reds and yellows were in cultivation. At present only the common orange form (see plate 8), a larger form, cv.'Aurora', and the yellow as shown here, are readily available. The yellow form was either introduced later than the orange-red form or arose as a seedling from it: Sir Thomas Hanmer grew it in 1659. Samuel Gilbert in 1690 listed it as *Corona Imperialis flore luteo simplici*, together with four other forms of the species.

Crown Imperials are easily cultivated in well-drained soil, and thrive as far north as Sweden and Canada.

PLATE 9 labelled *Fritillaire Impériale* var. *jaune*



Fritillaire, Impériale var. jaune.

This robust species of *Hosta* is native to China, where it was long cultivated before being introduced to gardens in Japan and to Europe. As was the case with the first camellias to be introduced, the first hostas (initially included in *Hemerocallis*, then later put in a separate genus long known as *Funkia*) were thought to require hothouse treatment. In 1805 Samuel Curtis wrote in the *Botanical Magazine* 'thought to bloom best in the stove, but thrives very well in a greenhouse, and some cultivators assure us that it succeeds in the open ground better than with any other treatment'.

Hosta ventricosa was one of the first species of the genus to be grown in English gardens, as it is said to have been introduced in 1790 by George Hibbert (1757–1838), a noted patron of horticulture and botany who is commemorated by the genus *Hibbertia* (plate 47). It stands apart from most species of *Hosta* in having dark purple flowers which from a narrow basal tube are rather abruptly swollen into a longer campanulate limb, hence the epithet *ventricosa*, literally 'pot-bellied', adopted from Salisbury's illegitimate name *Bryocles ventricosa*. Other synonyms are *Hemerocallis caerulea* Andrews, *Hosta caerulea* (Andrews) Trattinick, *Funkia ovata* Sprengel, *Funkia latifolia* Miquel and *Hosta miquelii* Moldenke.

H. plantaginea (Lamarck) Ascherson, another Chinese species, was introduced at the same time, but other species did not appear in cultivation until they were sent back by von Siebold from Japan between 1826 and 1830.

PLATE 10 labelled *Hemerocallis Caerulea*



Hemerocallis Caerulea.

Paradisea liliastrum (Linnaeus) Bertolini Liliaceae

St Bruno's Lily is a native of the Alps, Pyrenees and Apennines, where it grows in subalpine meadows, its pure white flowers looking like a small Madonna lily. It is not often seen in gardens today, but was described and illustrated by Parkinson in his *Paradisus* (1629). Apparently not difficult to grow, it deserves to be seen more often. A related species from Portugal, *P. lusitanica* (Coutinho) Sampaio is, however, easier to grow and makes a clump of soft leaves which send up spikes of several smaller flowers to a height of two feet or more. The supposed Tibetan species *P. bulbulifera* Lingelsheim does not belong here; it is the same as *Notholirion hyacinthinum* (E. H. Wilson) Stapf, and, on grounds of priority, has been renamed *Notholirion bulbuliferum* (Lingelsheim) Stearn.

The generic name *Liliastrum* is from *Lilium*, 'lily' and *-astrum*, 'inferior, incompletely resembling'. Linnaeus called the species *Hemerocallis liliastrum*. In 1811 Giovanni Mazzucato established a new genus for it, *Paradisea*, in an extremely rare work, *Viaggio botanico*, naming it in honour of an Italian botanist Giovanni Paradisi (1760–1820) of Modena.



Phalangium.

P. J. Redouté

L. J. Brune.

Victor.

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The tuberose, *P.tuberosa*, was first described and illustrated by Clusius in 1601, under the name *Hyacinthus Indicus tuberosa radice*. He had received it in 1594 from a correspondent, Bernard Paludanus, who had received it from Simon de Tovar in Seville. Although not known in a wild state it must have come from Mexico where all the other species are native and was introduced by the Spaniards into both Europe and the East Indies. The English name 'tuberose' is evidently derived, possibly by way of the French 'tubereuse' or the Italian 'tuberosa', from Clusius's name. The tuberous rootstocks were certainly being imported into England from Italy late in the seventeenth century and Philip Miller recorded in the eighteenth century that 'the Genoese are the people who cultivate this plant' and that from Genoa it was exported annually to England, Holland and Germany. John Evelyn's mention of 'Indian tuberoses' in his *Kalendarium hortense* (1664) indicates that the name 'tuberose' must by then have been commonly used. Linnaeus established the genus as *Polyanthes* and he included in it also *Agapanthus africanus* but later changed the name to *Polianthes* and restricted it to this species.

The tuberose was much loved by the Victorians, and is still grown today as a pot plant for the cool, or heated, greenhouse. If given sufficient heat the plants can be forced into flower at almost any time of the year; in an unheated greenhouse blooms will be produced in late summer.

A double form was raised in the eighteenth century in Holland and is still grown under the cultivar name 'The Pearl'.



Tuberosa.

P. J. Redouté.

Tuberosa.

Chapuy.

This herbaceous perennial comes from the west coast of South America; the French clergyman, astronomer and botanist, Feuillée, in his *Journal des Observations physiques, mathématiques, et botaniques, faites sur les Côtes orientales de l'Amérique méridionale* (1714) described three species of *Alstroemeria* and reported that *A. pelegrina* grew wild on a mountain just north of Lima. It was introduced from Peru into Spain, whence Baron Clas Alströemer (1736–94) sent seeds to Linnaeus, who named the genus in his honour. Linnaeus is reputed to have been so anxious to raise the plants successfully that he kept the seedlings in his bedroom throughout the winter. *Alstroemeria* is remarkable in having its leaves turned upside down by a twist of the petiole.

In 1753 *A. pelegrina* was introduced to the Royal Garden at Kew; being a high-altitude plant it is much hardier than *A. ligtu* (although still only half-hardy) and will flower from June to September. When grown out of doors alstroemerias need well-drained soil, and dislike being disturbed; they should be protected from frost. If grown under glass they require regular feeding throughout the summer and should be watered freely during the growing season. Alstroemerias can be propagated by seed or by division of the fleshy tuberous roots.



Hippeastrum reginae
(Linnaeus) Herbert

Amaryllidaceae

The genus *Hippeastrum* consists of about seventy-five species in tropical America and one in west tropical Africa. The species illustrated here, *H. reginae*, a native of Brazil, has been grown in Europe since 1725. James Douglas (1675–1742), who was physician to Queen Caroline, wife of George II, gave it the epithet *reginae*, ‘of the queen’, because it was at its most beautiful on her birthday, 1 March. Apparently Linnaeus had no firsthand knowledge of the plant but published the name *Amaryllis reginae* in 1759 on the basis of an illustration in Philip Miller’s *Figures of the most beautiful, useful and uncommon Plants* plate 23 (1755) and another in Paul Hermann’s posthumous *Paradisus Batavus*, 194, plate 62 (1698).

In Virgil’s *Eclogae* a beautiful shepherdess is named Amaryllis. Rejecting Tournefort’s generic name *Lilio-narcissus* as an objectionable hybrid name, Linnaeus in 1737 substituted *Amaryllis* for the plants concerned on account of their beauty. He included nine species in *Amaryllis* in 1753, all differing so much from each other that later authors have put them in separate genera, e.g. *Sternbergia*, *Zephyranthes*, *Sprekelia*, *Nerine*, *Crinum*, *Brunsvigia*, *Cybistetes* and *Boophane* leaving only one, *A. bella-donna*, in *Amaryllis*.

Unfortunately there has been long-lasting controversy over the application of the specific name *Amaryllis bella-donna* and consequently of the generic name *Amaryllis*. Undoubtedly Linnaeus’s account included an American species now known as *Hippeastrum puniceum* (Lamarck) Voss, but it has been contended that it also included a South African species for which another name is *Callicrore rosea* (Lamarck) Hannibal. The name *Amaryllis bella-donna* is now usually restricted to this South African species and the name *Hippeastrum* used for the American species and their hybrids still commonly called ‘amaryllis’ by gardeners. Indeed, many species now included in *Hippeastrum* were first described and named as species of *Amaryllis*.

PLATE 14 labelled *Amaryllis brésilienne* *Amaryllis bresiliensis*



Amaryllis brasiliensis

Amaryllis brasiliensis

Hippeastrum puniceum (Lamarck)

Voss

Amaryllidaceae

This bulbous plant, now generally known as *Hippeastrum equestre*, is widely distributed in South America and the West Indies and is naturalized in other tropical regions. It is a variable species, and so there are a number of natural varieties; several double and many single forms have also been raised. According to Aiton's *Hortus Kewensis* (1789), this species was introduced into Britain in 1778 by Dr William Pitcairn. The epithet *equestre* is thought to derive from the spathe being composed of two lobes which stand up above the flower rather like a horse's ears. Hence Herbert's generic name *Hippeastrum* from Greek *hippos*, 'horse' and Latin suffix *-aster*, *-astra*, *-astrum* indicating incomplete resemblance.

In cold climates hippeastrums require the protection of a conservatory or greenhouse, and can be grown successfully in the house; the flowers normally appear during the spring. Propagation is by seed.

PLATE 15 labelled *Amaryllis equestre*



Amaryllis equestris.

Sprekelia formosissima
(Linnaeus) Herbert

Amaryllidaceae

Two species of *Sprekelia* are known from tropical America, and this, the only one cultivated, is native to the mountains of Mexico. It has been known in Europe since 1593, when it was sent to Clusius in Vienna by his friend Simon Tovar of Seville, a Spanish physician, who called it *Narcissus Indicus Jacobaeus*. In *Rariorum Plantarum Historia* (1601) Clusius however called it *Narcissus latifolius Indicus rubro flore*. Apparently Tovar used the epithet *Jacobaeus* because the flower reminded him of 'the crimson sword worn as a badge by the Knights of the Spanish Order of St James ... in memory of the victory gained by El Cid over the five Moorish kings in 1045'. In Redouté's time the plant was still called 'Lys St Jacques'. Heister named the genus after a Hamburg lawyer Johann Heinrich von Sprekelsen (1691–1749) whose garden and library Linnaeus visited in 1735.

L. S. Hannibal, in his article 'The Sprekelias' (see *Journal of The Royal Horticultural Society* 93(8) 334–6 (1968)), describes his surprise at finding colonies of bulbs growing at an elevation of 8300 feet, indicating that the species is hardier than was previously thought. He also noted that bulbs were found growing on shattered lava flows and steep banks where the drainage was exceptionally good. In other places he found that they grew in rocky pockets of pure leafmould and in one instance on a mountain of pumice. This gives us a good idea of the conditions preferred by the species, which applies also to the great variety of the naturally-occurring and horticultural forms. Bulbs should normally be planted at a depth of about six to eight inches; Hannibal also noted that the plants he found at higher altitudes had driven themselves in deeper, presumably to avoid the sharp frosts and sudden variations in temperature.

PLATE 16 labelled *Amaryllis*

Lys St Jacques



Amaryllis.

P. J. Redouté.

De L. Jacques.

V. du

Cyrtanthus obliquus Aiton

Amaryllidaceae

In South Africa, where it is native, this is called the Giant *Cyrtanthus* or Sore-Eye Flower. It was introduced into cultivation by the Kew plant-collector Francis Masson in 1774, but has never become as common as its beauty would seem to merit. The flowers are very waxy in texture, around three inches long, and the erect leaves are twisted and almost evergreen, dying down for a short time in winter while it is dormant. During the summer, while in active growth, the plant requires a reasonable amount of water, but should be kept dry while dormant.

In its native habitat, *Cyrtanthus obliquus* is visited by sunbirds, and both the striking colour combination of orange and green and the stiff waxy hanging tubular flowers are adaptations to bird pollination.

PLATE 17 labelled *Cyrtanthe oblique*

Cyrtanthus obliquus



Cyrtanthe oblique.

P. J. Redouté

Cyrtanthus obliquus.

Boccon

Narcissus tazetta Linnaeus
subsp. *aureus* (Loiseleur) Baker

Amaryllidaceae

Narcissus tazetta is found wild all round the Mediterranean region. A form known as var. *chinensis*, 'Water Fairy Flower' or 'Grand Emperor', is one of the few European plants to have become popular in Chinese gardens. A Chinese work of about AD 850 records the home of the *nai-k'i* i.e. *N. tazetta*, as being in Fu-lin, i.e. Syria, and Chinese paintings of it survive from the thirteenth century. According to Laufer *nai-k'i* corresponds to Middle Persian *nargi*, Aramaic *narkim*. *N. tazetta* can be found naturalized in places across Central Asia, for example near Samarkhand and in Kashmir.

Narcissus tazetta, as currently accepted, is a very variable species with a multitude of forms which have been grouped into three subspecies according to flower colour: *tazetta* proper with the segments (tepals) white and the corona deep yellow; *italicus* with the segments yellowish or pale yellow and the corona a deeper yellow; *aureus* with segments deep yellow and the corona deep yellow or orange. Shown here is subsp. *aureus*, which is found wild only in south-eastern France, north-western Italy and on Sardinia. Very similar plants are cultivated today under the name 'Grand Soleil d'Or'.

The Latin *narcissus*, from the Greek *narkissos*, is associated with the myth of the beautiful youth Narkissos who, having repulsed the nymph Echo, fell in love with his own reflection in a clear spring and pined away, then becoming the flower named after him. Pliny in the first century AD dismissed this story, saying it was not derived from a fabulous boy but from the Greek *narke*, 'torpor'. The extraordinarily erudite scholar Berthold Laufer, acquainted with at least twenty-six ancient and modern Asiatic languages, stated in 1919 that 'in my opinion, the Greek *narkissos* is derived from an Iranian language through an idiom of Asia Minor, not *vice versa*'. The epithet *tazetta* is an Italian vernacular name evidently referring to the cup-like corona, being a diminutive of *tazza* 'cup'.

PLATE 18 labelled
Narcisses à plusieurs fleurs

Narcissus tazetta



Narcisse à plusieurs fleurs.

Narcissus tazetta.

Narcissus tazetta (Linnaeus)
subsp. *italicus* (Ker-Gawler) Baker Amaryllidaceae

This subspecies of *Narcissus tazetta* is distinguished by its pale yellow flowers. It is native to the northern and eastern Mediterranean region. Cultivated forms of this subspecies are still grown in large numbers alongside 'Grand Soleil d'Or' on the Scilly Isles, where it is called 'Grand Primo Citronère'; 'Avalanche' is a very similar form.

PLATE 19 labelled
Narcisses à plusieurs fleurs Var. *Narcissus tazetta* Var.



Narcisse à plusieurs fleurs. Var.

P. J. Redouté... 5.

Narcissus tazetta. Var.

Chapuy.

Narcissus × *incomparabilis* Miller Amaryllidaceae

These ancient double narcissi are derived from *Narcissus* × *incomparabilis*, the hybrid between the daffodil (*N.pseudonarcissus*) and the Pheasant Eye or Poet's Narcissus (*N.poeticus*). The hybrid usually has pale yellow flowers, with a rather short corona, and can be found wild in places such as central southern France, in the Massif Central where the two species grow together. The double-flowered forms have been cultivated since at least the late seventeenth century. They have picturesque old vernacular names such as 'Butter and Eggs', 'Codlins and Cream', and 'Eggs and Bacon', depending on the different colours of the various petals.

PLATE 20 labelled *Narcisses doubles*

Narcissus Gouani



Narcissus doubles.

Narcissus Gouani.

P. J. Redouté.

Bessey.

Moraea tricuspidata

Iridaceae

(Linnaeus fil.) G. J. Lewis

Ixia maculata Linnaeus

var. *fusco-citrina* (DC) G. J. Lewis

Ixia polystachya (Thunberg) Ker-Gawler

Moraea is a large African genus of about a hundred species closely related to the European *Iris* and *Gynandriris*. Indeed, several species are found in high damp grassland in Central and Southern Africa, looking exactly like rather slender, small-flowered irises.

The species shown here is *M.tricuspidata*, often called *M.glaucopsis* or grey-eye, and many other species also have the striking central patch of contrasting colour; in *M.villosa* this eye is so striking and complex that the plants are called 'Peacock' *Moraeas*.

The genus *Ixia* is exclusively South African, with about fifty species, like slender-stemmed, small-flowered Gladioli or Freesias. Most species are deciduous, flowering in spring and becoming dormant in summer. The yellow-flowered species shown here is *I.maculata* var. *fusco-citrina* from south-west Cape Province, and the white-flowered species is *I.polystachya*, also from Cape Province. Both *Ixias* and Peacock *Moraeas* in cultivation require similar treatment: a well-drained rich sandy soil, with ample moisture while growing, and a warm dry resting period, kept away from frost.

PLATE 21 labelled

(No. 1) *Vieusseuxi* à taches bleues (Nos 2 & 3) *Ixia* (Variétés)

(N^o 2.)

(N^o 1.)

(N^o 3.)

(N^o 1.)

Vicperuvii à taches bleues.

P. J. Redouté.

(N^{os} 2. et 3.)

Livia (Variété)

L. anglaise.

Ixia latifolia Delaroché
Leucojum aestivum Linnaeus

Iridaceae
Amaryllidaceae

Ixia latifolia was so named by Delaroché in 1766 but his account being based on inadequate material the species was later named *I. aulica* Aiton in 1789, *I. scariosa* Thunberg in 1811 and *I. phlogiflora* Delile in 1814. Called by Redouté the Phlox-flowered Ixia, it is a native of South Africa, found on mountain slopes near Ceres, in September and October. The flowers can vary in colour from mauve to pink or magenta, and there may be up to seven on a stem 18 inches high.

Leucojum aestivum, the Loddon lily or summer snowflake, is a familiar garden plant in Europe and eastern North America. The leaves appear in winter or early spring, the flowers usually in April and May. Summer snowflakes are native of wet fields and willow thickets by rivers throughout Europe and western Asia, growing happily in a few inches of water. The seeds are adapted for dispersal by floods. After flowering the stems bend downwards and the opening capsules drop their large black rounded seeds on the water or damp soil. These have an air-space under the seedcoat making them buoyant, and an experiment by Rolf Nordhagen reported in 1932 showed that they can float for three or four weeks. Since under cultivation it grows well in ordinary soil, its restriction in the wild to watery places must be due to this method of dispersal. In England it flowers in April to May; Linnaeus, however, name it *aestivum*, 'relating to summer', because in the Linnaeus garden at Uppsala, Sweden, it flowers between 20 May and 10 June, i.e. in early summer (information kindly provided by Gunnar Peterson, Uppsala). *Leucojum vernum* L., the spring snowflake, flowers there between 12 April and 8 May but in March in England. This species grows naturally in drier places and its seeds have a large yellow appendage attractive to ants when the ripe capsules lie on the ground.

PLATE 22 labelled 1. *Ixia* à fleurs de Phlox 2. *Nivéole d'été*



1. *Scilla a fleurs de Phlox.*

P. A. Rodière.

2. *Nivéole d'été.*

L. Ang. 1810.

Ixia viridiflora Lamarck

Iridaceae

This very striking species of *Ixia* is easily recognized by its bluish-green flowers with dark blue centres. It is a native of South Africa, in the area around Tulbagh, where it grows on low hills, flowering in September and October. The stems, up to two feet high, can have twelve or more flowers.

The species has a very restricted distribution in the wild and is reported as near to extinction. Fortunately it is common in cultivation in Europe and the USA and regularly available from bulb merchants. It requires well-drained sandy soil and protection from frost, combined with as much light as possible. In northern Europe it flowers in early spring.

The name *Ixia*, from the Greek for bird-lime, refers to the glutinous sticky sap of many of the species.

PLATE 23 labelled *Ixia à fleurs vertes*

Ixia viridiflora



Lixia à fleurs vertes.

Lixia viridiflora.

P. J. Redouté.

Bessin.

Sparaxis tricolor (Curtis) Ker-Gawler

Iridaceae

The genus *Sparaxis* differs from *Ixia* in having tattered papery bracts at the base of each flower. There are now only six species of *Sparaxis* recognized, all native to the south-western Cape area of South Africa, and mostly found in places which are wet during the growing season and dry thereafter.

S.tricolor is one of the brightest, with its contrasting bands of colour. The main part of the petal can vary from red to orange, yellow or creamy-salmon. In the wild it flowers in September, but in cultivation in the northern hemisphere, where it requires protection from frost, it flowers in spring.

PLATE 24 labelled *Ixia tricolor*

Ixia tricolore



Ixia tricolor.

P. J. Redouté.

Ixia tricolore.

Victor.

Gladiolus undulatus Linnaeus
(*G.cuspidatus* Jacquin)

Iridaceae

This is one of the hundred or so species of *Gladiolus* native to South Africa. It has been known in Europe since 1764, when it was sent to Linnaeus from Holland by J. Burman, who had received it from the Cape of Good Hope. Unfortunately, it was later named *G.cuspidatus* by Jacquin and this name came into general use. Corms were introduced into France in 1795. Redouté in *Les Liliacées* (1802 and 1807) illustrated two forms, one pink-flowered, the other yellowish.

In South Africa, *G.undulatus* has been recorded from the Cape peninsula (where it is white or cream-coloured) and northwards and eastwards, growing on mountain slopes in damp places and by rivers, flowering from October to January. The flowers vary in colour from pink to white or greenish. Since it can increase by producing cormlets, it has become naturalized as a weed in both Mauritius, in sugar-cane fields, and Australia.

PLATE 25 labelled *Glayeul en pointe*

Gladiolus cuspidatus



Glaioul en pointe.

P. J. Reaume.

Gladiolus cuspidatus.

Langlois

The genus *Watsonia* is related to *Gladiolus* but differs in having the flowers in two ranks, facing opposite ways, and hair-like divided style branches. *W. meriana* is a particularly variable species, which now includes the rather dwarf *W. humilis*. It is a deciduous species, not making a large clump, flowering in early summer, and found wild in moist, rather marshy areas, both in Cape Province, from where it was brought to Europe in 1754, and in Natal.

Jacquin, who named this plant *Gladiolus laccatus*, was by no means alone in assigning it to the wrong genus, for at one time or other it has been described under the genera *Ixia*, *Neuberia* and *Antholyza*, as well as *Gladiolus*. The name *Watsonia* commemorates Sir William Watson (1715–87), a celebrated physician, naturalist and physicist. In 1754 he described Linnaeus's *Species Plantarum* (1753) as 'the masterpiece of the most compleat naturalist the world has ever seen' and helped to make Linnaean methods and names known in Britain. The specific epithet *meriana* commemorates the intrepid German entomological artist Maria Sibylla Merian (1647–1717) who spent nearly two years in Surinam to study its remarkable insects but also portrayed tropical plants as hosts and settings for them.



Cylindropuntia color de Saque.

P. J. Redouté.

Cylindropuntia Saucieriana.

Chapman

Tigridia pavonia
(Linnaeus fil.) De Candolle

Iridaceae

Although not introduced into European gardens from Mexico until late in the eighteenth century, the tiger-flower, *Tigridia pavonia*, first came to Spanish attention between 1571 and 1577 when the physician Francisco Hernandez described and portrayed it. His account remained unpublished, however, until 1651. He was sent out to New Spain, as Mexico was then named, by Philip II of Spain, but, as so often happened for Spanish naturalists overseas, his zealous and painstaking fieldwork received little but neglect in Spain. Most of Hernandez's manuscripts perished in a fire in the Escorial in 1671. He called this plant 'Ocoloxochl seu Flos Tigris', noting that the flower was spotted like the skin of a tiger. The tiger-lily, *Lilium tigrinum*, the tiger-cowrie, *Cypraea tigris*, and the stoneware known as tiger-ware are also spotted, whereas the tiger (*Panthera tigris*) is well known for its stripes. This Asiatic carnivore was, however, unknown to Spaniards in America and they used the name *tigre* for its spotted American counterpart, the jaguar (*Panthera onca*), hence the name *Tigridia* for this beautifully spotted plant from Mexico and Guatemala. There are now at least twelve cultivated forms, including one with pure white flowers and another with pure yellow flowers.

The Mexican Tiger Flower has been a popular garden plant since its introduction to Europe in 1796. It is easily grown, the bulbs being planted outdoors in a warm sunny place in late spring and brought indoors away from frost in winter and kept dry; that is, treated the same way as modern gladioli. It is still grown in Mexico today, under the name *Cacomite*, and is now found, apparently naturalized, in much of Central America and northern South America. Although the genus *Tigridia*, with about thirty species, extends into the Andes of Peru and Chile, most species of *Tigridia* are native to Mexico; they have smaller flowers than *T. pavonia*, some upright and brightly coloured, some nodding and speckled, of sombre hues like Fritillaries.

PLATE 27 labelled *Tigridie queue de Paon* *Tigridia Pavonia*



Tigridia queue de Paon.

P. J. Redouté.

Tigridia Pavonia.

Victor

Iris japonica Thunberg
(*I.fimbriata* Ventenat)

Iridaceae

This beautiful *Iris* is common in many parts of China and Japan, hanging down along roadsides, by rivers, on cliffs, and in openings in the forest. It makes a fan of shining evergreen leaves from which arises a much branched inflorescence; the flat flowers appear in succession, each lasting only a day.

I.japonica has been cultivated in Europe since 1792, when it was brought from China by Thomas Evans. It survives about 10°C of frost, but needs a warm, sheltered position to grow well and flower freely. It flowers in spring and the opening buds can be spoiled by late frosts, so a cool greenhouse suits it best.

PLATE 28 labelled *Iris frangée*

Iris fimbriata



Iris frangée.

P.J. Redouté.

Iris sibirica.

Langlois.

Iris pallida Lamarck

Iridaceae

This is a beautiful tall bearded *Iris* which has undoubtedly played an important part in the development of modern hybrids. It can be recognized by its fragrant, sky-blue flowers and wholly transparent papery, silvery bracts. The fans of leaves are large and glaucous green, and are decorative even when the plant is not in flower.

I. pallida subsp. *pallida* is native to the Adriatic coast of Yugoslavia, where it grows on cliff ledges and rocky places in the mountains, flowering in May. The closely-related subspecies *cengialti* found in northern Italy has fewer, darker-coloured flowers, brownish spathes, and thinner, less glaucous leaves.

PLATE 29 labelled *Iris pale*

Iris pallida



Iris pale.

P. J. Redouté.

Iris pallida.

Victor.

Iris xiphium, the Spanish Iris, is one of the parents of the Dutch Irises, familiar because so many are forced and sold by florists in winter.

I.xiphium itself is native to Spain, Portugal, southern France and Italy, where it grows on grassy hills, flowering in April and May. It has long been cultivated for ornament, and was beautifully illustrated in about 1580 by Giacomo Ligozzi, Superintendent of the Uffizi gallery in Florence, and an accomplished flower painter, whose work rivals that of the great eighteenth-century masters. Apart from the usual blue, wild varieties are known with yellow, or white and yellow, flowers.

Other species of *Iris* related to *I.xiphium* are found in Spain and North Africa. *I.latifolia* (Miller) Voss (*I.xiphioides* Ehrhart), commonly called English Iris but native to the Pyrenees, has larger flowers with broader petals and is an excellent garden plant as it can tolerate wet summers better than *I.xiphium* and the other Mediterranean species.

PLATE 30 labelled *Iris Xiphium*. Variété.



Iris Niphiura. Varietal.

P. J. Redouté.

Langlois.

Iris latifolia Miller

Iridaceae

This plate shows a flower of *I. latifolia* infected by Iris mosaic virus, which produces the patches of deeper colour on the petals as well as yellow streaks on the leaves. The virus is now common in cultivated irises of this group, and nearly all commercial stocks will be found to be infected.

PLATE 31 labelled *Iris Xiphium*.

Iris Xiphium



Iris Niphium

P. J. Redouté

Iris Niphium

Langlois

Crocus sativus is the economic plant of the eastern Mediterranean region for which the Greek name *krokos*, Latin *crocus*, was first used, and has been cultivated since the Bronze Age due to the high value of saffron, its dried styles, for flavouring, dyeing and medicinal use. It is still cultivated commercially in Kashmir and some Mediterranean countries, notably Spain and Turkey. Formerly it was grown commercially as far north as Britain (hence the name Saffron Walden in East Anglia) until about the eighteenth century when its cultivation ceased, presumably as a result of the onset of cooler summer weather at that time. Its origin remains unknown, but Brian Mathew (*The Crocus*, Batsford 1982) thinks that it may be a selection of the wild saffron *C. cartwrightianus*, a native of Greece, with smaller stigmas and strongly veined flowers. The name 'saffron' and hence knowledge of the plant itself, may go back some 5,000 years if the interpretation of the Akkadian word 'azupiranu' as saffron is correct. Saffron is prepared from the dried, bright orange styles of the *Crocus* flower; its high price is due partly to the large number of flowers (over 3,000) needed to obtain one ounce of spice, and partly to the fact that it has to be harvested by hand. In earlier times saffron was also used as a dye for clothes by the ancient Greeks, and for the saffron shirts of medieval Irish chieftains, as well as for medicinal purposes; in 1671 a German, Hertodt, published *Crocologia*, a book devoted entirely to the treatment of diseases using saffron. In Britain saffron is used in the preparation of saffron cakes, a speciality of the West Country.

Although easy to grow in northern Europe, *C. sativus* does not normally get sufficient heat to flower freely; to induce flowering it should be grown under glass to ripen the bulbs in the summer. Other requirements are plenty of moisture in spring and autumn, and the planting of corms at a considerable depth in a rich soil.



Crocus sativus

Safran cultivé

P. J. Redouté.

Langlois.

The Lady's Slipper Orchid is the largest-flowered of all the European orchid species, and the only *Cypripedium* found in western Europe. Two further species, *C. macranthon* and *C. guttatum*, are found in the foothills of the Urals and eastwards.

In England the Lady's Slipper has always been rare, found mainly on the limestone hills of Derbyshire, Durham and Yorkshire. Its beauty has been its undoing. Parkinson, who in 1629 called it '*Helleborine vel Elleborine maior*, sive Calceolus Mariae, Our Ladies Slipper' and described it as 'this most beautiful plant of all these Kindes', then stated that it grew in 'Lancashire, neare upon the border of Yorkeshire . . . as I am enformed by a courteous Gentlewoman, a great lover of these delights, called Mistris Thomasin Tunstall . . . who hath often sent mee up the rootes to London, which have borne faire flowers in my Garden'. Orchids have little power of recovery from excessive collecting and Victorian collectors all but exterminated the Lady's Slipper and it has been unable to recover. One plant only is said to linger in the wild in England. In the Alps and eastern Europe, however, the Lady's Slipper is, though very local, still found in many areas, usually on limestone, in subalpine woods and pastures among rocks, and in most countries is now legally protected.

The glasshouse slipper-orchids often called 'cypripediums' with persistent leathery leaves are now placed botanically in the genera *Phragmipedium* and *Paphiopedilum*.



P. J. Redouté.

Sabot des Alpes.

L. anglois

The tulip tree, *L.tulipifera* L., occurs in the wild from Nova Scotia south to Florida, and was introduced to Britain about 1660. Philip Miller, in his *Gardener's Dictionary* (1731), says that about fifty years earlier a tree had flowered in 'a wilderness in the Gardens of the Right Honourable the Earl of Peterborough, at Parsons Green near Fulham'. He also noted that prior to this event, specimens of *L.tulipifera* had been considered so tender that they were kept in pots and tubs and brought indoors for the winter.

In its native state this tree will grow up to two hundred feet high, and in Britain specimens of over a hundred feet have been recorded. Mark Catesby (1682–1749), an English naturalist, the author and illustrator of *The Natural History of Carolina* (1730–47), described specimens with trunks thirty feet in circumference; he also recorded that the yellow fine-grained timber was much prized in North America. There is a form known as 'Integrifolium', in which the unlobed juvenile foliage persists; there are also two variegated and one fastigiate cultivar. A closely-related species, *L.chinense* (Hemsley) Sargent, grows in central China.



Tulipifera.

P. J. Redouté.

Tulipifera.

Bessey.

Magnolia × *soulangiana*
Soulange-Bodin

Magnoliaceae

The eighty or so species of *Magnolia* are deciduous or evergreen trees and shrubs, native both in the Himalayas and south-east Asia, and in the southern states of the USA and Central America. The Ice Ages exterminated them in Europe. The genus takes its name from Pierre Magnol (1638–1715), a professor of botany and medicine, and director of the botanic garden at Montpellier. Both Plumier and Linnaeus thought it fitting that such an outstanding botanist as Magnol should be associated with a tree having such conspicuous flowers. The beautiful hybrid illustrated here, a cross between *M.denudata* and *M.liliiflora*, was raised in the garden of M. Soulange-Bodin at Fromont, near Paris, and first flowered in 1826. Since then it has become one of the most popular magnolias cultivated in Europe and North America, being spectacular, hardy and easy to grow. The flowers appear on the bare branches in April, continuing to be borne until June, by which time the tree is fully clothed in foliage.

There are a number of varieties and forms of this magnolia, all of which have petals more or less white on the inside and purple on the outside; of these perhaps the best known are ‘Alba Superba’, ‘Lennei’, ‘Picture’, ‘Rustica Rubra’, ‘Speciosa’ and ‘Superba’.

PLATE 35 labelled *Magnolia Soulangiana*



Magnolia Soulangeana.

P. J. Redouté.

Langlois.

Nymphaea caerulea Savigny

Nymphaeaceae

Although this day-blooming blue-flowered waterlily with pointed petals, which is common in canals of the Nile delta, was not scientifically named until 1803, its beauty led the ancient Egyptians to portray it and to place its flowers in their tombs from at least 4,000 years ago. From Egypt it extends southward into central Africa. Seed may produce flowering plants in the second year after sowing. It has been cultivated in northern Europe since 1803 and can be grown in a greenhouse pool or large tub of water.

The French army under Napoleon Bonaparte which invaded Egypt in 1798 was accompanied by a remarkable team of scientists, scholars and artists whose record of the country was so diligent that their *Description de l’Egypte* occupies twenty folio volumes published between 1809 and 1825. Redouté’s younger brother Henri-Joseph Redouté (1766–1852) went as a zoological artist. The scientists included a French zoologist, who had intended to be a botanical teacher, M. J. C. L. de Savigny (1777–1851), and after the destruction of the French fleet and defeat of the army by the British, the French scientific and artistic commission returned to France in 1802. Savigny described the blue Nile waterlily in 1799 and again in 1803 as a new species *Nymphaea caerulea* from material collected in Lower Egypt, Redouté providing an engraved plate. His friend Raffenu Delile brought back living rhizomes and seeds from Rashid (Rosetta).

PLATE 36 labelled *Nymphaea Caerulea*



Nymphaea Carulea.

The illustration depicts a group of single varieties of *Anemone coronaria*. The species is variable in colour and is found throughout the Mediterranean (although possibly not native in the western regions) where it flowers in early spring. It has been known in Britain for several hundred years; Gerard was growing a number of varieties in 1596. Many hybrids and strains are available commercially today, notably St Brigid (double or semi-double) and De Caen (single) strains, and these are much used by florists as cut flowers.

A. coronaria and its varieties can be grown outdoors in Britain and similar mild climates and prefer good, well-drained soil in full sun. By successive planting, it can be persuaded to flower at all seasons, but to obtain blooms in winter the plants must be protected with cloches from October onwards. Propagation is by seed, offsets, or by division of the rhizomes.

The blood-red form common in the eastern Mediterranean region was associated by the Phoenicians with worship of the slain god Tamnuz, also known as Adon (Lord) and Naaman (darling) from whose blood it was supposed to have sprung; the flowers were placed in 'Adonis gardens' and the name *Anemone* is believed to be a Greek corruption of a lament for Naaman.



Anemone simple.

P. J. Redouté

Anemone simplex.

1790

Anemone hortensis Linnaeus

Ranunculaceae

Sometimes known as *Anemone stellata* Lam., but correctly *Anemone hortensis* L., this species occurs in the wild throughout the northern and eastern Mediterranean areas, from France eastwards to Albania. In the south of France it interbreeds with naturalized forms of *A. pavonina* to form *A. × fulgens*.

The name *Anemone hortensis* as used by Clusius in 1601 was a group name covering forms of *A. pavonina*, *A. coronaria*, *A. palmata*, *A. apennina* and this species, to which Linnaeus restricted it although it has no particular association with gardens.

Curtis's *Botanical Magazine* (1805) notes that 'In 1790, when our figure of *Anemone hortensis* was published, that plant was considered as a rarity, but it has since been much cultivated, and is now become very common'.

A. hortensis flowers in March and April, but only opens out to its full extent in bright sunlight. It can be propagated by seed or by division of the tubers, and will grow happily in light, well-drained soil in warm areas such as the south of England or California.

PLATE 38 labelled *Anémone étoilée*

Anemone stellata



Anemone étoilée.

P. J. Redouté.

Anemone stellata.

Victor.

This vigorous, deciduous, free-flowering climber is a native of southern Europe and western Asia, and has been cultivated in Britain since the sixteenth century (hence the common name 'virgin's bower' referring to Queen Elizabeth I). The attractive nodding, bluish-purple flowers appear from July to September and are made up of four sepals borne on long flower stalks. Many well-known beautiful garden hybrids and varieties, both single and double-flowered, have been raised from *C.viticella*, including var. *albiflora* (white), cv. 'Plena' (double purple flowers), cv. 'Rubra' (red), 'Alba Luxurians' (white, with green tips and dark anthers), 'Etoile Violette' (purple) and 'Royal Velours' (very dark purple). The stem of *C.viticella* is partially woody, but both it and its forms and hybrids die back during the winter; hard pruning during February and March is beneficial. Most *Clematis* have a largely undeserved reputation for being difficult to grow, but given good conditions – i.e. well-drained soil rich in humus, with a mulch to help retain moisture – they will flourish. Clematis wilt is the chief enemy of these charming plants, so it is often recommended that 2–3 inches of stem should be buried below the soil when planting, to encourage new growth to sprout in the event of an attack.



Clematis Viticella.

The place of origin of the opium poppy is obscure, but may have been in the Near East or elsewhere in the Mediterranean region. It was certainly grown for oil-rich seeds by the neolithic inhabitants of the Swiss lakeside villages, and during the Iron Age it spread into northern Europe. The seeds have a distinctive reticulate pattern and thus are easily recognizable in archaeological remains. They possess no narcotic properties and presumably were sprinkled on bread in ancient times as now. Today it is widely cultivated in Asia. The ancient Greeks and Romans knew that the latex obtained by making cuts on the unripe capsule known as *opos* or that boiling the capsules known as *meconion* had a calming or sleep-inducing effect and that too much caused death.

In Turkey it grows best in Anatolia, and there is a town called Afyon, meaning opium, which has long been a major centre of growing opium poppies. Opium, obtained by notching the unripened seed capsules of the poppy and collecting the juice, or latex, is the basis of many useful medicines such as morphine, codeine and laudanum; it also yields heroin, the highly addictive drug so frequently misused. The misuse of opium is not a new problem. Coleridge and de Quincey both became opium addicts when it was commonly used in Britain to dull pain and induce sleep.

The so-called 'Opium Wars' during the early nineteenth century between China and Britain arose out of the restrictions placed upon trade by the Chinese which led the British to import excessively large quantities of opium from India into China in return for silk, tea, and silver. The Chinese from 1796 onwards had attempted to prohibit the import and sale of opium but were frustrated by traders and their confiscation of 20,000 chests of opium at Canton was a factor in the two-year war beginning in 1839.



Pavot.

Papaver.

P. J. Redouté. — 23.

Langlois.

Meconopsis cambrica
(Linnaeus) Viguier

Papaveraceae

The genus *Meconopsis* is remarkable in its discontinuous distribution. The species shown here, *M.cambrica*, the Welsh Poppy, is found wild in western England, Wales and Ireland, and western Europe from the Auvergne and Pyrenees into western Spain and Portugal. It grows in rocky woods and by streams, and is also commonly found where it has escaped from cottage gardens, with pale orange as well as yellow flowers. It was first described as *Papaver erraticum Pyrenaicus* by Caspar Bauhin in 1620 and then as *Papaver luteum Cambrobritannicum* by Parkinson in 1629.

All the other *Meconopsis* species are found at least 4000 miles further east in the Himalayas, from Pakistan eastwards into central China. Here there are about forty different species, mainly high alpine, with flowers of all colours. *M.horridula*, with spiny leaves, has been recorded at 19,000 feet on Mount Everest. The famous 'Blue Poppy', *M. betonicifolia*, was first collected by the French missionary Jean-Marie Delavay (1838–95) in Yunnan, western China, and by the adventurous British explorer and secret agent Colonel Frederick Marsham Bailey (1882–1967) in south-east Tibet, his very incomplete material receiving the name *M.baileyi*, and not until Frank Kingdon-Ward introduced it into cultivation in 1924 from Bailey's locality were the two recognized as forms of the same species.

All *Meconopsis* are easily grown from seed, although the individual plants tend to be short-lived. They require cool moist summers.

PLATE 41 labelled *Papaver Cambricum*



Papaver.

P. J. Redouté.

Cambricum.

Langko.

Helleborus niger Linnaeus
Dianthus caryophyllus Linnaeus

Ranunculaceae
Caryophyllaceae

The Christmas rose, *Helleborus niger*, has long been valued for its flowers, and the use of its black medicinal roots as a rather drastic purgative is mentioned by Pliny. It is native to mountain woods in the eastern Alps and the Balkans, usually flowering as soon as the snow has melted in spring, although in mild parts of western Europe it can be in flower at Christmas (as can, in exceptional years, the Lenten roses, *H. orientalis*, which usually flower in March). In gardens *H. niger* requires a shady, well-drained but not dry position, such as the north side of a wall, and protection from slugs, which are particularly partial to the buds.

Clove carnations were developed from *Dianthus caryophyllus*, a native of southern Europe, and have been grown in gardens since the sixteenth century. In art they were used as replacements for roses to express divine love symbolically. They were loved both for their rich colours and their intense smell of cloves. Although very hardy they require well-drained, sandy soil, preferably containing lime. They need frequent rejuvenation, by taking cuttings at least every other year and placing them in sandy soil in early autumn.

PLATE 42 labelled *Ellebore*

Oeillet



Ellberg.

P. J. Redouté

Ellberg.

Langlois.

The names of this deliciously scented species, the clove-pink or clove-carnation, have a complicated history relating largely to its fragrance. The generic name *Dianthus*, which at first sight might be assumed to come from Greek *di*, 'two' and *anthos*, 'flower', is a slightly shortened form of the Greek name *diosanthos* from *dios*, 'heavenly, divine' and *anthos*, 'flower', used by Theophrastus (c.370–285 BC) not for *D.caryophyllus* but for a scentless species which has been identified as *D.sylvestris*. The epithet *caryophyllus* from Greek *karyophyllon*, a name for the dried flower buds of the clove-tree (*Syzygium aromaticum* syn. *Eugenia caryophyllus*) refers to the spicy perfume of the clove-pink. This Greek name for the imported spice produced the Italian *garofilo*, the Venetians largely controlling the medieval overland spice trade, the French *girofle* and the corruption of this into English 'gillyflower', then 'July-flower'. Since the individual bud somewhat resembles a nail, it was called a *clou* in French, hence 'clove'. The German herbalist and physician Leonhart Fuchs in 1542 and 1543 used the name 'negelblüm' with the same association, and William Turner referred in 1538 to the 'clowgelofer', the 'clove-gillyflower' of later authors.

Dianthus caryophyllus, the clove-pink, the ancestor of our carnations and pinks, is found either wild or naturalized in the Mediterranean area, e.g. in Greece, Spain, Sardinia, Sicily and Italy, and also as an undoubted introduction on old walls and ruins, but its natural range is obscure. Canon Ellacombe noted in the 1860s that it grew on the castle walls of Falaise, the birthplace of William the Conqueror, and also on the Norman ruins of Rochester, Dover and Deal, thus suggesting a Norman introduction to England.



C. Met. panache.

P. J. Redouté.

Dianthus carioophyllus.

Chapuy

Dianthus caryophyllus Linnaeus

Caryophyllaceae

Various suggestions, none conclusive, have been made regarding the origin of the name 'carnation' for the garden forms of *Dianthus caryophyllus*. One, deriving from Gerard, is that it is merely a horticultural application of the old colour term 'carnation' meaning 'flesh-coloured', which was used by Shakespeare. The learned and conscientious R. C. Alexander Prior (1809–1902) stated categorically in 1869: 'CORONATION, the older and more correct spelling of *carnation*, from its M.Lat. name *Vettonica coronaria*, as in Dodoens, Tabern[aemontanus], and Lyte, . . . so called from its flowers being used in chaplets, *coronae*' which accords with the poet Edmund Spenser's request in his *Shepherdes Calendar* (1679):

with Gelliflowres
Bring Coronations, and Soppes in wine,
worn of Paramoures.

Another suggestion, by John Harvey, is that it is a misrendering of the Turkish *Karanfil* (pronounced Kar-na-feel) possibly as *car-natik*, when so many plants were imported from Constantinople in the sixteenth century; there is always a tendency to assimilate strange foreign words to familiar ones.

According to Harvey, the double carnation was developed by Turkish gardeners before its introduction into the west by 1475 or about that time. However, once available it became popular in central and western Europe, being grown in pots and much esteemed.

PLATE 44 labelled *Oeillet Variété*



Miller Variété.

Lychnis coronata Thunberg

Caryophyllaceae

This species of campion is native to eastern China, and has long been grown in gardens there. It was introduced into Japan as a garden plant, although the Japanese have several equally beautiful wild species, and from Japan introduced to Europe by Thunberg in about 1775.

It is not fully hardy, but hybrids with the Siberian *L. fulgens* Fischer, named *L. × haageana*, are hardy and often cultivated, though reported to be short-lived and beloved by slugs.

PLATE 45 labelled
Lychnide à grandes fleurs

Lychnis grandiflora



Lychnidea grandiflora.

P. J. Rott.

Lychnis grandiflora.

Victor

Plumbago auriculata (often known as *P.capensis* Thunberg) is a shrub easily recognized by its heads of clear pale blue flowers, their colour uncommon in flowering plants. A native to South Africa, from the eastern Cape to the Transvaal, it was found by the Swedish botanist Carl Peter Thunberg near the Kabeljaus river. Messrs Colville and Son grew it at their nursery in Chelsea in 1819.

The Cape Leadwort, as it is known in the USA, is a popular greenhouse or conservatory plant in cold climates, but can also be used for summer bedding. In frost-free climates, e.g. in the Mediterranean region, it can be grown as a low hedge and will withstand both heat and drought. It can also tolerate a few degrees of frost, and even when cut down to the ground in winter soon recovers, flowering from mid-summer onwards; it can eventually form a bush up to six feet high or higher if climbing through a taller shrub. A white-flowered variant is known.

A separate species, *Plumbago indica* L. (*P. rosea* L.), native of the East Indies, has deep pink flowers and requires more heat.



Dentelaire bleu de ciel.

Plumbago cærulea.

Hibbertia scandens
(Willdenow) Dryander

Dilleniaceae

This beautiful but unpleasantly scented plant, often called *H.voluminosa* (Andrews) Ventenat but more correctly known as *H.scandens*, is native to Australia, from eastern Queensland to New South Wales, and was introduced into cultivation in Europe about 1790. It requires protection from hard frost, being grown as a conservatory plant in northern Europe and eastern North America, valuable for its early flowering. In California, however, it grows easily outside, flowering until May, and is used for covering fences or trellis.

The name commemorates George Hibbert (1757–1837), a well-known amateur gardener who made an extensive collection of plants in his Clapham garden.

PLATE 47 labelled *La Dillenne*

Dillenia scandens



La Dillenne.

P. J. Redouté

Dillenia scandens.

L. anglois.

This is a form of the Tree Peony or Moutan, which has been a popular garden plant in China since the seventh century. It was first introduced to Europe on the instigation of Sir Joseph Banks by Mr Duncan, 'a medical gentleman' employed by the East India Company in 1787. This form was called 'Banksii' and was double, purplish-red at the base fading towards the apex of the petals. The paler form shown here is probably 'Rosea Plena', introduced in 1795.

Paeonia suffruticosa is still a popular garden plant in China, where it thrives as far north as Peking, and in Japan. It is native to the mountains of north-western China, but distinctly uncommon; William Purdom found it in Shensi with flowers of 'dark and rich magenta crimson' in 1910 and Farrer and he found it in Gansu (Kansu) with white flowers magenta-blotched at base in 1913. A form very close to this wild form was introduced from a Lamasery garden in Gansu by Rock, and has remained in cultivation under the name 'Joseph Rock' or 'Rock's variety'.

This species was long known as *P.moutan* Sims, a name published in 1808, but Andrews' *P.suffruticosa*, published in 1804, has priority.



Pivoines de la Chine.

P. J. Redouté.

Paeonia.

Victor.

Paeonia suffruticosa

Paeoniaceae

This double white form of the Moutan peony does not seem to have been grown in England before the 1840s when Fortune introduced a large number of different cultivars, but was evidently introduced much earlier into France.

PLATE 49 labelled *Pivoine odorante*

Paeonia flagrans (sic)



Paeonia odorante.

P. J. Redouté.

Paeonia fragrans.

Langlois.

This peony is native to southern Europe from France eastwards to Hungary and Romania, growing in open woods and rocky places. It flowers in late spring, and the single deep pink flowers last only a few days. The double red-flowered form, however, which is much commoner in gardens, has longer-lasting flowers. It has been grown in gardens since the seventeenth century.

Peonies grow wild all around the northern hemisphere with the exception of eastern North America, but have a much broken distribution and are often very local within an area. The two species of western North America, *P.brownii* and *P.californica*, are small-flowered, with interesting brownish-red leathery petals. In China both herbaceous and shrubby species occur, the finest being *P.suffruticosa* (plate 48), which can have flowers more than ten inches across. The division of European peonies into species has presented much difficulty. Thus the sixteen distinguishable kinds in Europe can with equal propriety be regarded as constituting sixteen species or nine species, some of them divided into subspecies. These occur here and there from Portugal to the Balkan Peninsula and Aegean islands and eastward and northward onto the steppes of European Russia. One, *P. anomala* var. *intermedia*, extends from Central Asia into the Kola Peninsula of arctic European Russia. They are all herbaceous plants, with flowers of red, pink or white, but one or two yellow-flowered species are found in forests high in the Caucasus of Soviet Georgia.

The name *Paeonia* is derived from the Greek *paionia* and connected with Paeon the mythical physician of the gods. The old English spelling 'peony', with *pyony* as an alternative form, was used by Turner, Gerard, Parkinson, Samuel Johnson, Miller and other English authors but after 1818 the mongrel spelling 'paeony' partly replaced it in Britain but not in USA.

PLATE 50 labelled

Pivoine officinale à fleurs simples

Paeonia officinalis mas



Paeonia officinale à fleurs simples.

P.J. Redouté.

Paeonia officinalis mas.

Langlois

Paeonia officinalis 'Alba Plena'

Paeoniaceae

This white form of the common garden peony (see plate 50) is now rare in gardens. It has been grown since at least as early as the seventeenth century, and is the white equivalent of the old-fashioned double deep red, still often seen in old or neglected gardens, as it has great powers of survival.

PLATE 51 labelled *Pivoine*

Paeonia officinalis



Livoine!

P. J. Redouté ... 4.

Paeonia officinalis.

Boiss.

Paeonia tenuifolia, one of the smallest of peony species, is notable for its finely divided leaves, with very narrow segments, and bright red flowers which measure $2\frac{1}{2}$ –3 inches across. It is native to Southern Russia, Bulgaria, Romania and Yugoslavia, growing on the steppes, rolling plains and hills, covered with long grass and numerous attractive flowers, like a taller-growing version of English chalk downland turf or American prairie.

In spite of its beautiful flowers and distinct leaves, *P. tenuifolia* is rare in cultivation, perhaps because it is slow to raise from seed and, like all peonies, dislikes being moved or divided. In the garden it requires well-drained dry soil and full sun. It has been grown in gardens in northern Europe at least since 1594. There is, or has been, in cultivation a double red form cv. 'Plena' (known since 1765) and a pale pink form cv. 'Rosea', as well as a hybrid with *P. lactiflora* called *P. × smouthii*, which is an excellent garden plant often bearing several flowers on a stem, and a hybrid with *P. anomala* called *P. × hybrida* or *P. bergiana*.



Paeonia tenuifolia.

P. J. Redouté.

Pivoine à feuilles Linaïres.

Chapuy.

Camellia japonica Linnaeus 'Alba simplex' Theaceae

This and the following three plates show varieties of *Camellia japonica*, a large shrub or small tree native to Japan and Korea but long cultivated in China.

The early introductions came from China, and consisted of cultivars from Chinese gardens in and around Canton. Like other Chinese garden plants introduced in the eighteenth century, camellias were thought to require hothouse treatment, or at least the protection of a cool greenhouse, and gardeners did not realize the essential hardiness of *Camellia japonica* until the twentieth century. Some have been known to tolerate temperatures up to -20°C without damage, when sheltered and not subjected to hot sun while frozen.

In areas where winters are very cold and dry, camellias are best treated, as they were in Redouté's day, as plants for the cool greenhouse or orangery. They are however especially suitable for growing outside in cities, as they are drought-tolerant and will flower with little sun, and appreciate the protection from frost and wind afforded by buildings.

In the mountains of central and southern Japan, wild *C. japonica* has cup-shaped red flowers. It makes a large shrub by rivers or a slender tree growing up through the forest. *C. japonica* is very liable to produce mutant branches, and these, as well as seeds, were a major source of the numerous varieties, about a thousand in all, grown in the nineteenth century, with flowers in various shades of red, pink or white, single, double or semi-double, and variously striped, blotched or veined. Illustrated here is the variety 'Alba Simplex', grown in England since 1819.

PLATE 53 labelled *Camellia blanc*

Camellia Japonica



Camellia 'blanc'

P.J. Redoute.

Camellia japonica.

Bessin.

Camellia japonica 'Alba Plena'

Theaceae

This ancient camellia cultivar was introduced from China to England in 1792 by a Captain Connor.

In Redouté's time camellias were becoming very popular in England; new varieties were being imported both from China and Japan, and different forms and colours were being raised in nurseries. The fashion for camellias reached its height in France in the mid nineteenth century; they became a symbol of sophistication, as for example in the drama by Alexandre Dumas (fils), *La Dame au Camélias*.

PLATE 54 labelled
Camellia (var) *fleurs blanches*

Camellia Japonica



Camellia (var) fleurs blanches.

Camellia japonica

P. J. Redouté.

Langlois.

Camellia japonica 'Variegata'

Theaceae

This camellia cultivar was brought from China to England in 1792, and introduced by Alfred Chandler's nursery at Vauxhall, south London.

PLATE 55 labelled *Camélia panaché*

Camelia Japonica



Camelia panache.

P.J. Redouté - 9.

Camelia japonica.

Langlois

Camellia japonica 'Anemoneaeflora Rosea' Theaceae

In anemone-flowered camellias the stamens are replaced by narrow curled or rolled petals. This ancient cultivar was probably introduced to Europe from China in the early nineteenth century.

PLATE 56 labelled
Camellia à fleurs d'Anémone

Camellia Anemonefolia



Camellia à fleurs d'Anémone.

de J. Redouté.

Camellia Anemonifolia.

Langlois.

The genus *Dombeya* consists of about a hundred species, natives of tropical Africa and the islands of the Indian Ocean. The species illustrated here was introduced to France from Madagascar in 1823, and first flowered in the Royal Gardens at Neuilly in 1830 where its beauty caught the attention of Queen Marie-Amelie who commissioned Redouté to paint it.

Other species of *Dombeya* are still in cultivation, and require warm greenhouse treatment. They make small trees or tall shrubs with large soft leaves and white, pink or red flowers often hanging in umbels.

The genus commemorates the gay, charming and extravagant but unfortunate Joseph Dombey (1742–96), a French botanist and doctor who accompanied Ruiz and Pavon on their expedition to Peru and Chile. After narrowly escaping shipwreck while rounding Cape Horn, on the way home he had half his collection seized by the Spanish when he landed in Cadiz, and barely reached France with the remainder. He was then ruined in the Revolution, but survived and managed to get himself sent to America to buy corn for the French. On the way, however, he ran into another revolution in Guadeloupe, and was taken prisoner (disguised as a Spanish sailor) by the British, dying in their hands in Montserrat.



Lombeya (Anthurium)

P. J. Redoute

Bessin

This deciduous shrub, which originates from eastern Asia, is hardy and can grow up to ten feet high. Its date of introduction into Europe is unknown, but it has been grown since the sixteenth century at least, and is of particular value as an autumn-flowering shrub. Parkinson, in his *Paradisus* (1629), remarked that this plant is 'somewhat tender, and would not be suffered to be uncovered in the Winter time, or yet abroad in the Garden, but kept in a large pot or tubbe, in the house or in a warme cellar, if you would have them to thrive'. Nowadays, however, it is considered perfectly hardy even in central Europe and the coastal parts of eastern North America. The epithet *syriacus* is misleading in that the species is not of Syrian but Chinese origin.

There are numerous forms with single or double flowers varying in colour from white, red and violet to purple; among the better known ones grown today are 'Blue Bird' (blue), 'Duc de Brabant' (pink), 'Hamabo' (white with deep red markings), 'Lady Stanley' (white with a crimson blotch), 'Snowdrift' (white), 'Violet Clair Double' (purple-blue) and 'Woodbridge' (crimson). The flowers appear in succession from July to October and are quite spectacular.

H. syriacus likes full sun and a well-drained soil. In climates with a colder summer it is advisable to plant it against a wall to provide shelter from cold winds and extra summer heat. It can be propagated by means of cuttings or layers.



Althea Fruticosa.

Hibiscus Syriacus.

Lavatera phoenicea Ventenat

Malvaceae

This Hibiscus-like tree-mallow is a rare endemic species of the Canary Islands known only from Tenerife, where it grows on north-facing cliffs. Pierre M. A. Broussonet (1761–1807), a Montpellier botanist and zoologist who was a friend of Redouté, collected in the Canary Islands in 1799 to 1803 and sent seeds of this and other species to Paris in 1803.

It is now very rarely seen in gardens, not being hardy in the British Isles. It would however grow happily in the open in California, on the Mediterranean coast or on the Scilly Isles where many Canary Island plants thrive.

PLATE 59 labelled *Lavatera Phoenicea*

Hibiscus



Lavatera Phoenicea.

Hibiscus.

Hibiscus trionum (syn. *H.africanus* Miller), commonly known as the Flower-of-an-hour or Bladder Ketmia, is a native of Africa and of Southern Europe, but has been cultivated in gardens for many years. According to the account in *Curtis's Botanical Magazine* plate 209 (1792) 'seeds of the plant . . . are sold in the seed shops under the name of Venice Mallow, a name by which it was known in the time of Gerard and Parkinson'. They also called it 'Good night at noone' because 'these flowers are so quickly faded and gone'. This plant is valued as an annual, which is easy to raise from seed. The showy flowers are produced continuously during August and September but are very short-lived. Breeders are now producing strains which flower for most of the day.

The names Bladder Ketmia and Bladder Hibiscus refer to the bladder-shaped calyx which encloses the seed capsule. The seeds may be sown direct into the flowering position in April, or under glass a little earlier. The plants will thrive in ordinary, well-drained soil and like full sun; if left undisturbed self-sown seedlings may appear the following year.

The epithet *trionum* is puzzling. Linnaeus said it was a name used by Theophrastus but the only word in ancient Greek at all resembling it is *thrion* (fig-leaf).



Mauve.

P. J. Redouté

Hibiscus trionum.

Langlois

Phymosia umbellata (Cavanilles) Kearney Malvaceae

This Abutilon-like plant is native to Mexico. It makes a shrub or small tree up to twenty feet high in the wild but flowers when much smaller in a heated greenhouse in winter and spring. The form with crimson flowers illustrated here has been in cultivation in Europe since 1814.

Although long known as *Sphaeralcea umbellata* (Cavanilles) G. Don, this has been transferred from *Sphaeralcea* to the closely related genus *Phymosia* primarily on account of differences in the splitting of the mature fruiting carpels. Horticulturally a more important distinction is that the species of *Phymosia*, which are Central American and West Indian, are shrubs or small trees, whereas those of *Sphaeralcea*, which occur not only in tropical America but also in South Africa, are subshrubs or annual or perennial herbs. The name *Phymosia* from Greek *phuma*, 'tumour' refers, not very appropriately, to the slightly swollen carpels.

PLATE 61 labelled *Mauve pourpre*

Malva purpurea



Mauve pourpre.

P. J. Redouté.

Malva purpurea.

Chapuis.

Cienfuegosia heterophylla
(Ventenat) Garcke

Malvaceae

Apparently unaware of the publication by Cavanilles in 1786 of *Cienfuegosia*, Redouté's friend and botanical collaborator Ventenat took this species as sufficiently distinct from related plants to represent a new genus which in 1800 he named *Redutea*. Unfortunately the name *Redutea* can no longer be maintained. The species illustrated here has been transferred to the genus *Cienfuegosia*, named to commemorate a Spanish botanist Bernardo Cienfuegos (fl.c.1599-1631) who compiled a seven-volume manuscript *Historia de las Plantas* never published.

C.heterophylla ranges from the West Indies to northern South America: it was introduced into cultivation from the West Indian island of St Thomas. It makes a low shrubby plant with leaves of variable shape, hence the epithet *heterophylla*. There are about twenty-three species, according to a revision of the genus by Paul A. Fryxell in 1969, occurring in Africa and America but not Australia, the species there once placed in *Cienfuegosia* being now in a separate genus, *Alogyne*.

PLATE 62 labelled *Redutea heterophylla*



Rosa heterophylla.

P. J. Redoute.

Bressin

Viola tricolor Linnaeus
V. × wittrockiana Gams

Violaceae

Viola tricolor, also known as Heartsease, Wild Pansy and, to quote Parkinson in 1629, ‘foolish names as Love in idlenesse, Cull mee to you and Three faces in a hood’, is an annual or short-lived perennial native to Europe, including Britain, and western Asia. Parkinson described the flowers as ‘so variably mixed with blew or purple, white and yellow, that it is hard to set downe all the varieties’. These three colours in one flower of the common form led to its being taken in the Middle Ages as a symbol of the Trinity sometimes called *Flos Trinitatis* and accordingly included in the marginal illustrations of Books of Hours.

The species is very variable both in size and colour, but had little horticultural importance and did not change in flower colour and size until about 1800 when crossing with *V. lutea* and possibly *V. altarpa* and selection by British gardeners led to creation of the garden pansies. By 1835 there existed about four hundred named varieties. From Britain they were introduced to the continent of Europe, where further breeding and selection took place.

The collective name for the garden pansies is *V. × wittrockiana* commemorating a Swedish botanist, Veit Brecher Wittrock (1839–1914), who studied their origin and history.

PLATE 63 labelled *La Pensée*

Viola tricolor



La Pensée.

P. J. Redouté

Viola tricolor

Langhans

A bouquet of pansies

Pansies have long been grown in English cottage gardens, and there are numerous references to them in literature since the time of Shakespeare. Interestingly, Redouté's name *La Pensée* is mirrored in *Hamlet*:

There's rosemary, that's for remembrance; pray, love, remember;
and there is pansies, that's for thoughts.

The Victorians were much attached to pansies, and used them frequently to adorn valentines and sentimental notes. They are still extremely popular today, and new varieties are being raised all the time. (See also plate 63.)

PLATE 64 labelled *Bouquet de Pensées*



Bouquet des Pensées.

This beautiful rampant climber, a native of Peru and Brazil, was popular in hothouses in Europe soon after it was introduced in 1772 by William Malcolm (fl. 1750–98). It is very similar to the commonly-grown tropical *P. quadrangularis* L., the Grenadilla, which is grown for its delicious fruit, but differs in its redder sepals and petals, the less wavy filaments of the corona, and the less sharply four-angled stem.

P. alata was crossed with the nearly hardy *P. caerulea* L. to form the beautiful hybrids *P. × alatocaerulea* and ‘Imperatrice Eugenie’, named after Empress Eugenie, wife of Napoleon III.



Passiflora ailée.

P. J. Redouté

Passiflora alata.

Langlois

The specimen painted here by Redouté is untypical of the species *Passiflora racemosa* which usually has an elongate raceme of flowers hanging down, without leaves.

This species, like so many Passionflowers, is native to Brazil, where it grows in shady forests. It was introduced to Europe by Mr Woodford, and grown first in his garden in Lisbon, before being brought to England in about 1815. It is one of the most spectacular species for the warm greenhouse, with a very long flowering season and, when growing well, striking pendent racemes of flowers.

Spanish missionaries in tropical America in the sixteenth century, seeing for the first time the remarkable flower of this genus then unknown in Europe, named it *Flos Passionis*, associating it with the instruments of the Passion, the suffering of Christ on the cross. According to Hilderic Friend, *Flowers and Flower Love* 192 (1884) 'The name was given by the superstitious in former times who saw in the five anthers a resemblance to the five wounds received by Christ when nailed to the cross. In the triple style are seen the three nails employed; one for each of the hands, the other for the feet. In the central receptacle one can detect the pillar of the cross, and in the filaments is seen a representation of the crown of thorns on the head. The calyx was supposed to resemble the *nimbus* or glory, with which the sacred head is regarded as being surrounded.' Few would associate with such astonishing theological ingenuity the label 'passion fruit' on supermarket shelves.



Grenadille à grappes.

Passiflora racemosa

P. J. Redouté

Langlois

Cheiranthus cheiri Linnaeus

Cruciferae

Cheiranthus cheiri, the wallflower, is a native of the quarries, sea-cliffs and old walls of Europe, and has become naturalized in Britain. Although a perennial when growing among rocks, it is often treated in gardens as an annual or biennial bedding-out plant; for many years it has been grown in cottage gardens.

The flowers are produced in late spring and early summer and are fragrant. The flower colour of this species is very variable, and today there are many cultivars available in shades of white, yellow, orange, red and mauve.

As can be seen from its native habitat, the wallflower likes a well-drained soil, preferably limy, and it also prefers a position in full sun.

All the cultivars can be easily raised from seed, the one exception being the well-known variety 'Harpur Crewe', which is sterile and must therefore be propagated by means of cuttings taken during the summer.

PLATE 67 labelled *Giroflée jaune*

Cheiranthus flavus



Gagea jaune.

P.J. Redouté.

Cheiranthus flavus.

Chapuy.

Erica vestita Salisbury

Ericaceae

This is one of the five hundred or so species of heather native to South Africa, and is characterized by its numerous long, narrow, soft leaves and large, long-tubed flowers, which may be white, pink or red.

In the wild *E.vestita* makes a compact but erect shrub up to ten feet high, with leaves that shimmer in the wind. It is found in Cape Province, on dry or moist mountain slopes and hills, where it flowers from August to May.

The tubular red flowers suggest that this species is naturally pollinated by sunbirds, and in southern California, where it grows well outdoors, it attracts hummingbirds. Introduced to cultivation in Europe in 1789, it was much grown in conservatories in the nineteenth century. Nowadays, however, few Cape heaths are grown in Europe, mainly because their cultivation requires both skill and care, with the use of pure rain-water, coarse peat and silver sand.



Erica.

P. J. Redouté.

Bruyère.

Langlois

Enkianthus quinqueflorus Loureiro

Ericaceae

This species of *Enkianthus* is native to the warmer parts of southern China and Hong Kong, and requires protection from frost if it is to be cultivated successfully. It first flowered in Europe in Knights' Royal Exotic Nursery at Chelsea (which later became Veitch's) in 1814.

This *Enkianthus* has long been grown in gardens in China, and was frequently depicted in old Chinese paintings. It makes a semi-evergreen or deciduous shrub or small tree, with bright red young leaves, after the manner of *Pieris forrestii*. Its flowers are produced in May, and are usually pink, about half an inch long, with reflexed lobes. The slightly swollen base of the corolla led the Portuguese botanist Loureiro to coin the generic name *Enkianthus* from Greek *enkyos* (pregnant) and *anthos* (flower).

PLATE 69 labelled *Enkianthus Quinqueflorus*



P. J. Redouté.

Enkianthus quinqueflorus.

Bosser.

Cyclamen persicum Miller

Primulaceae

This is the wild ancestor of the large commercial cyclamen, now grown by the thousand as winter-flowering pot plants. It is native to the eastern Mediterranean, from Mount Athos (its only station on the European mainland) to Crete, Karpathos and the islands along the Turkish coast, south to Syria but not to Persia (Iran). Guillemin records that it was first introduced to France from Cyprus around 1731.

Even the wild *Cyclamen persicum* is not hardy. In nature it grows at low altitudes, up to 2500 feet, usually in crevices on cliffs or in old walls, flowering in early spring. The flowers are pale pink with a dark eye, and are sweetly scented, a character lost with increase in size of flower. In other cyclamen species the flower stalk coils like a corkscrew or spring after the flower fades, drawing the developing seed pod down among the leaves, making the seeds accessible to ants, but in *C.persicum* the stalk remains uncoiled though bending downwards. In cultivation *C.persicum* requires protection from frost, and a dry resting period in summer.

PLATE 70 labelled *Cyclamen*



Cyclamen.

P. J. Redouté.

Langlois.

Most of the *Primula* species native to China are hardy mountain plants, but some species occur at lower altitudes, in steamy gorges or on lowland shaded cliffs; three of these have become popular as winter-flowering greenhouse plants – *P.sinensis* (*P.praenitens*) illustrated here, *P.obconica* and *P.malacoides*.

Primula sinensis has been grown in Chinese gardens for centuries, and its native distribution is not known. It was introduced to Europe from Canton in 1821, through the agency of John Reeves (1774–1856), an inspector of tea for the Hon. East India Company who had established a garden in Macao and made regular trips to Canton. He employed Chinese artists to paint local wild and cultivated plants and sent their coloured drawings to the Horticultural Society of London, enabling the Society to decide which plants would be worthy of introduction. One of these drawings received in 1819 portrayed this remarkable new primula. His efforts to introduce this in 1820 failed but in 1821 Captain Rawes brought a living plant to England. John Lindley named this *Primula sinensis* in 1821 but unfortunately a Portuguese missionary had used that name in 1790 for some other plant which cannot be identified, thus making Lindley's name invalid. The correct name now (1987) is *P.praenitens* Ker-Gawler (1821), but it is to be hoped the name *P.sinensis* Lindley non Lour. will be officially conserved.

The cultivation of these primulas reached a state of considerable sophistication in large gardens around the beginning of this century, when many different colours, including blue, and perfectly double-flowered forms were raised.



Primèvere de Chine.

P.J. Redouté.

Primula sinensis.

Bessin

Wild primroses are found throughout Europe from Ireland to Greece and even Turkey, and are absent only from the coldest parts of the north-east. They are mostly yellow-flowered, but a subspecies *sibthorpii* with red, pale purple or pink flowers is commonly found wild in Greece, Turkey, the Lebanon, and Georgia, and a white-flowered subspecies *balearica* in Mallorca. Red or pink-flowered primroses are also found in parts of Wales, but it is doubtful whether they are truly wild or have escaped from gardens into which foreign primroses had been introduced. There is no indication whether the specimen painted by Redouté was introduced from Greece, or was a pink-flowered selection of the common yellow one.



Primrose.

Grandiflora.

P. J. Redouté.

Bessin.

The cultivated auricula, as shown here, is descended from *Primula* × *pubescens*, a natural hybrid, as first noted by Anton Kerner in 1867, between *P.auricula* Linnaeus and *P.hirsuta* Allioni (*P.rubra* J.F. Gmelin). This was described by Clusius in 1601 as *Auricula ursi* II with red whitish-centred flowers from a plant growing in the garden of a Vienna physician Johann Aicholtz. He was also familiar with *P.auricula* L., which he described as *Auricula ursi* I. *P.auricula*, with yellow flowers, grows on limestone in the mountain ranges of the Alps, Appennines and Carpathians, while *P.hirsuta*, with pinkish-red flowers, dislikes limestone and is common in the Pyrenees and Alps. The two do not normally grow together, but will hybridize freely if they have the chance. One of us (M.R.) has seen a swarm of these hybrids, in a wide range of colours from cream to brown, growing on a rock face, half of which was alkaline and the other half acid, in the Swiss Alps. As Parkinson wrote in 1629, 'It is very probable, that none of these plants were ever known unto the Ancient writers ... Divers of the later Writers have given unto them divers names, every one according to his own conceit.' The use of members of the genus *Primula* by herbalists led to their receiving the names *Sanicula*, *Arthritica* and *Paralysis* and *Paralycica* as well as *Auricula ursi* or Bear's ear.

In 1544 Mattioli (Mathiolus), an Italian botanist, described and illustrated the auricula, and his contemporary, Clusius, this and other species of *Primula* as noted above; these plants are supposed to have been brought down from the mountains for sale by peasant women in Vienna. Clusius is credited with having introduced *P.auricula* and *P. × pubescens* into the Netherlands; thence they passed to England.

(continued on page 170)

PLATE 73 labelled *Oreilles d'Ours*

Primula auricula



Oreilles d'ours.

P. J. Redouté.

Primula auricula.

Langleis

(continued from page 168)

By 1596, Gerard was able to describe several kinds of 'Bear's Ear' growing in his garden, and Parkinson in his *Paradisus* (1629) lists twenty-one varieties. Plants and seed seem to have been imported from Holland during the seventeenth century, but many new varieties were also raised in England, some of which fetched very high prices. A further influx of new varieties came with the Flemish weavers, who settled in Lancashire during the early eighteenth century. They were well-known for their dedication and skill in growing what were then called 'florist's flowers', and soon developed new strains of auricula. The cultivated auriculas possess characters unknown in wild populations. By the end of the century, auricula shows and the accompanying 'florists feasts' were very popular events, particularly in the midlands and north of England, an area which is noted for auricula growing to this day.



Oreilles d'Ours.

P. J. Redouté.

Primula' Auricula' var.

Victor

Hydrangea macrophylla
(Thunberg) Seringe

Hydrangeaceae

The mop-headed hydrangeas had been cultivated by the Chinese long before they were introduced into Europe. Thunberg was the first botanist to describe an Asiatic hydrangea (although he mistook this one for a species of *Viburnum*) in either 1775 or 1776 when he was the medical officer at the Dutch trading station on a little island, Deshima, in Nagasaki harbour. Here the employees of the Dutch East India Company were kept virtually as prisoners but they were the only foreigners then allowed to live and trade in Japan. Siebold and Zuccari described it in 1845 in their *Flora Japonica* as *Hydrangea hortensia*, based on the Japanese variety 'Otaksa'. The name *Hydrangea* was based on an eastern North American species, *H. arborescens* L., and botanists did not at first associate the eastern Asiatic species with this. Redouté still used *Hortensia* as a generic name. The eighth edition of Bean's *Trees and Shrubs* (2:392;1973) gives a historical account of the use of the various names given to *H. macrophylla*. *Hortensia opuloides* was named by the French botanist Lamarck in 1789, based on a specimen sent to Paris by Commerson, who had collected it in Mauritius; it had apparently been brought there by Pierre Poivre, a botanist and explorer who had visited Canton and made a garden on Mauritius containing several Chinese plants.

Botanists of a historical or romantic turn of mind have speculated whom the genus *Hortensia* commemorates. She was certainly not Hortense de Beauharnais, daughter of Napoleon's Josephine, because she was not yet born. Nor was she Commerson's mistress, Jeanne Baret, who accompanied him on Bougainville's scientific expedition around the world disguised as his manservant. But she may have been the daughter of Commerson's fellow botanist and traveller, the Prince of Nassau-Siegen, who also took part in Bougainville's expedition.

PLATE 75 labelled *Hortensia*



Hortensia.

P.-J. Redouté

Langlois.

<i>Rosa</i> × <i>centifolia</i> Linnaeus	Rosaceae
<i>Anemone coronaria</i> Linnaeus	Ranunculaceae
<i>Clematis florida</i> Thunberg 'Plena'	Ranunculaceae

Shown here are a Centifolia rose (see plates 79–81), a double anemone and a double Clematis.

The crown anemone, *A.coronaria*, is a native of the Mediterranean region, where it grows in dry places among scrub and on rocky banks, flowering in early spring. The tuberous roots are dormant in summer, but start growth in autumn and can be forced to flower during the winter.

The double-flowered varieties as shown here were very popular in the seventeenth century in gardens in Holland and England, and are often illustrated in gardening books of the period. They were grown in gardens in Turkey before being introduced to Europe, along with the double *Ranunculus asiaticus*, the hyacinth and the tulip in about 1573.

The Double Clematis, *C.florida* 'Plena', so similar in flower to the anemone, is a product of Chinese rather than Turkish gardeners. It was long grown in China, but was introduced from Japan. The wild form is found in Hubei (Hupeh), and was seen both by Wilson and by Henry near the Ichang gorges; it has flowers about three inches across, with four to six white petals.

PLATE 76 labelled Rose Anémone Clématide



Rose.

Anémone.

Clématide.

Rosa × *reversa* Waldstein & Kitaibel

Rosaceae

This rose is thought to be a hybrid between *R.pendulina* L., the red rose of the Alps, sometimes called *R.alpina*, and the Burnet or Scotch Rose, *R.pimpinellifolia* L., sometimes called *R.spinossissima*. It usually makes a small bush up to five feet or so high, with flowers which vary from white to pink. The spines are numerous and slender, many more than are found in *R.pendulina*, but not as thick as those of *R.pimpinellifolia*. This hybrid is found wild in several places where the parent plants grow together, and deep-pink-flowered forms are often cultivated. The hybrids may be distinguished from pink-flowered forms of the Scotch rose by their elongated hips.

PLATE 77 labelled *Rosier du Candolle Variété*



Rosier de Candolle var.

Rosa gallica Linnaeus 'Duchesse d'Orléans' Rosaceae

This variety of *Rosa gallica* does not appear to be in cultivation now, but many similar varieties are still grown. *Rosa gallica* itself is a native of southern Europe, from France eastwards to Turkey. It forms a low suckering thicket of branches and has large pale pink flowers. It is certainly one of the earliest roses to be cultivated, both for its beauty and for its scent. In the Middle Ages someone discovered that the petals of the red variety kept their perfume even when dried and out of this there developed before 1300 a flourishing industry of growing this rose and manufacturing conserves and powders from the petals, notably sold by apothecaries at the town of Provins south of Paris. Thus *Rosa gallica* became known as the Rose of Provins and this particular form as the Apothecary's Rose. The commonest form in cultivation today is probably the striped red and white 'Rosa Mundi', which often reverts to the plain red 'Officinalis', the Apothecary's Rose.

Graham Thomas in *The Old Shrub Roses* has described the variants of *Rosa gallica* as 'at once the most ancient, the most famous, and the best garden plants among the old roses. They are also the ancestors in part of most other old roses, and their delicious fragrance is carried down through all their descendants.'

PLATE 78 labelled
Rosa Gallica Aurelianensis

La Duchesse d'Orléans



Rosa Gallica - Aureliensis.

P. J. Redouté.

La Duchesse d'Orléans

Langlois.

The Provence rose has been known since the late sixteenth century when Clusius received a plant from Holland and described it in his *Rariorum Plantarum Historia* (1601) as *Rosa centrifolia Batavica*, pointing out that it was not the *centifolia* of Classical authors.

It is a sterile garden hybrid, but at the same time unstable and likely to produce mutations, so that many varieties were selected in gardens, particularly in Holland in the seventeenth and eighteenth centuries. In England it was known as the ‘Holland Rose’, following Gerard and Parkinson, as well as ‘The Old Cabbage Rose’, the ‘Provence Rose’ (because it was thought to come from southern France) or the ‘Rose des Peintres’, because it forms the centrepiece of so many seventeenth- and eighteenth-century Dutch paintings.

Between the two world wars, Charles Chamberlain Hurst (1870–1947), originally a breeder of horses and orchids, studied the genetics of garden roses. He concluded that *Rosa centrifolia* was a complex hybrid with four species in its ancestry, which could have resulted from a cross between *R* × *alba* (*R.gallica* × *R.canina*) and *R.* × *damascena* (*R.gallica* × *moschata*), that it is closest to *R.gallica*, which indeed it closely resembles, and that its variants gradually evolved from 1580 to 1710 through the industry of Dutch breeders.



Rosa centifolia.

P. J. Redouté.

Rosier à cent feuilles.

Another form of Centifolia rose.

Three very slightly different forms of *R. × centrifolia* are shown in Redouté's *Choix des plus belles fleurs* (see also plates 79 and 81) and also four of the most distinct mutants, 'Bullata' (plate 82), 'Foliacea' (plate 83), 'Muscosa' (plate 84) and 'Pomponia' (plate 85).

In growth *R. × centrifolia* forms a rather lax bush, with thin branches which are usually weighed down by the quantity of nodding flowers. It is easy to grow and very hardy, but flowers only at midsummer.



Rosa centifolia.

P. J. P. Anna

Rosier à cent feuilles.

Langlois

Rosa × *centifolia* Linnaeus

Rosaceae

Another Centifolia rose (see plate 79).

PLATE 81 labelled *Rosa Centifolia*

Rosier à cent feuilles



Rosa Centifolia.

Rosier à cent feuilles.

P. J. Redoute

L'anglais

Rosa × *centifolia* ‘Bullata’

Rosaceae

This form of *Rosa* × *centifolia*, known since about 1801, is notable for its lush, puckered leaves, which when young are reddish, with pale veins in the folds. The French name, ‘Lettuce-leaved rose’ is rather more picturesque than appropriate to the modern lettuce. It is undoubtedly a sport of the common *R.* × *centifolia*, as the flowers and buds are typical, only the leaves being different. Altogether, twelve bud sports of *R.* × *centifolia* were recorded and preserved between 1637 and 1813, and are listed by C. C. Hurst.

PLATE 82 labelled
Rosa Centifolia Bullata

Rosier à feuilles de Laitue



Rosa Centifolia Bullata.

P. J. Redouté

Rosier à feuilles de Laitue.

Langlois.

Rosa \times *centifolia* Linnaeus 'Foliacea'

Rosaceae

This form of the Centifolia rose is distinguished by its leafy sepals. It has been known since 1801. Although this rose does not seem to be in cultivation today, the mutation which causes the sepals to be leafy can be seen in the China hybrid rose known as 'Bloomfield Abundance', a sport of 'Cécile Brunner', a miniature rose raised in 1880.

PLATE 83 labelled *Rosier à cents feuilles, foliacé*



Rosier à cent-feuilles, foliacé.

P.J. Redouté

Langlois

Rosa × *centifolia* Linnaeus ‘Muscosa’

Rosaceae

The Old Moss Rose is another sport, or mutation, of *R.* × *centifolia*. Its origin is somewhat obscure; it is reputed to have been cultivated at Carcassonne in southern France in 1696, and from there brought to north-west France, but the first definite mention of it appears to be a report of its growing in the botanic garden at Leyden in 1720. Philip Miller saw it there in 1727, and records that he was given a plant and grew it in the Chelsea Physic Garden.

The ‘moss’ of the moss rose consists of stiff glandular hairs and soft prickles in huge numbers; they are valuable both for their curiosity and for the extra scent they contribute to the already scented rose.

According to C. C. Hurst the moss mutation has appeared at least sixty-two times, both in England and abroad, and has occurred both on the Centifolia rose and on the Damask. Indeed, the white Damask moss often betrays its origin by reverting to a normal pink Damask, and the Centifolia moss has also been known to revert to its non-mossy parent.

PLATE 84 labelled *Rosa Muscosa*

Rosier Mousseux



Rosa Muscosa.
T. J. Rostoué.

Rosier Mousseux.
Victor.

Rosa × *centifolia* Linnaeus ‘De Meaux’

Rosaceae

This dwarf mutant of *Rosa centifolia* had been known in French gardens long before Redouté painted it (first in *Les Roses* in 1817), but its origin is not recorded. The flowers are sweetly scented, appearing at midsummer. A white form is known, and there was a mossy form which appeared in western England in 1801.

PLATE 85 labelled *Rosier Pompon*

Rosa Pomponia



Rosier Pompon.

P. J. Redouté.

Rosa Pomponia.

Victor.

The double Sulphur Rose has been cultivated in gardens in Europe since before 1625. It is certainly one of those garden flowers grown by the Turks and introduced to Vienna in the late sixteenth century from Constantinople; others with the same origin are the hyacinths, anemones and narcissi described elsewhere in this volume.

The wild *Rosa hemisphaerica* is native to Turkey and Iran, and, of course, has single flowers; it is otherwise distinct in its bluish-green leaves, in contrast to the bright green foliage of *Rosa foetida* whose double form is called 'Persian Yellow', and has deeper yellow flowers.

The Sulphur Rose is not entirely satisfactory in the English climate, as it requires hotter, drier summers for the flowers to open properly.



Rose jaune de soufre.

P. J. Redouté.

Rosa sulfurca.

Langlois.

This rambling rose was raised in 1826 by M. A. A. Jacques, head gardener to the Duc d'Orléans at Château Neuilly, and named after the Duke's sister. A hybrid of *Rosa sempervirens* L. (which originates from southern Europe and northern Africa), it is partially evergreen and in summer it bears semi-double flowers which hang down in small clusters. The buds are deep rose-pink, and when fully open the outside of the flower retains this colour even though the inner petals are white tinged with pink, contrasting with the yellow stamens. The delicate scent has been compared by some to that of primroses. The trailing shoots (which make this rose highly suitable for training over arches etc.) have prickles, and the small leaves are dark green.

Due to the revival of interest in 'old' roses, 'Adelaide d'Orléans' is happily still available commercially today from some specialist rose growers, as is its better known sister seedling 'Félicité et perpétue' raised by M. Jacques in 1829.

This rose takes two to three years to become fully established, but will thrive on well-drained, deep soil (the nearer to neutral the better) in full sun. If it is planted against a wall, be sure to give it plenty of water.



Adelaïde d'Orléans.

P. J. Redouté.

Adelai Aurelianensis.

Victor.

This is an ancient Chinese garden rose, found growing on the walls of Nanking (Nanjing), province Kiangsu (Jiangsu), and introduced to Europe in 1824 by John Parks when collecting for the Horticultural Society. It is on the borderline of hardiness in England, surviving on warm walls in the milder parts of the country, and flowering in May. A rampant climber, it can grow to great size in warm climates such as the south of France and Greece, or in the southern USA where the famous Lady Banks' rose at Charleston, Alabama, is said to be the largest in the world.

Wild *R. banksiae* (i.e. var. *normalis* Regel) is white and single-flowered, a native of the mountains of western China. The name *R. banksiae* was based on a white double form (var. *banksiae*) sometimes called '*Alba Plena*', introduced to Kew from a Chinese garden at Canton in 1807 and named by Robert Brown in honour of Lady Banks, wife of Sir Joseph Banks.



Rosier de Banckes var. à fleurs jaunes.

The China roses were almost unknown in Europe until the mid eighteenth century. There is evidence from a painting by Bronzino that a China rose was grown in Florence around 1529 and presumably continued through the seventeenth century, but such roses were unknown in northern Europe until Peter Osbeck, a student of Linnaeus, returned from China to Uppsala in 1752. Linnaeus, who stated 'habitat in China', nevertheless described such a rose in 1753 as *Rosa indica*. That rose was given the name of 'Blush Tea China', collected by Osbeck in the garden of the Customs House at Canton in 1751. This appears to be the rose illustrated here, and in the following plate. Neither this, nor the similar *Rosa indica fragrans* of Redouté, nor 'Hume's Blush Tea-scented China' has survived in cultivation in Europe, but they probably still exist in China, or in warm climates such as Bermuda which has acted as a reserve for old rose varieties.

According to C. C. Hurst, 'none of these early introductions of the China Rose to Italy, Sweden, Holland and England, however, seems to have played any part in the development of our modern Roses. That role was apparently reserved for four special English introductions of 1792, 1793, 1809 and 1824, each of which had a definite and permanent influence on the evolution of our garden roses.'

The name *R.indica* Linnaeus (1753) has been abandoned owing to uncertainty as to its precise application and the name *R.chinensis* Jacquin has been adopted for some of the plants formerly called *R.indica*. 'Hume's Blush Tea-scented China' is considered to have been a hybrid between *R.chinensis* and *R.gigantea* Collett and the collective name *R. × odorata* has been adopted for plants considered to be of this parentage.

PLATE 89 labelled *Rosa Indica*

Grande Indienne



Rosa Indica

Grande Indienne.

P. J. Redouté.

Boissin.

Rosa × *odorata* ‘Sulphurea’
(Andrews) Sweet

Rosaceae

This was a very new rose when Redouté painted it for the *Choix*. It was only introduced to France in 1825 by M. Hardy, the director of the Royal Luxembourg Gardens, Paris, whose name is preserved in the beautiful white Damask rose ‘Mme Hardy’.

‘Park’s Yellow Tea-scented China’ was brought from China by A. D. Parks when collecting for the Horticultural Society in May 1824. At about the same time, Knight, the Chelsea nurseryman, had raised a yellow seedling from the pale pink ‘Hume’s Blush Tea-scented China’, which had been introduced in 1810. It is suggested in Bean’s *Trees and Shrubs Hardy in the British Isles*, 8th edition, volume 4 (1980) that it was this seedling, not Parks’ yellow rose, that was illustrated by Redouté. Neither of these roses has survived in cultivation in Europe.

PLATE 90 labelled *Rosa Indica*

Rosier des Indes Jaune



Rosa Indica.

P. J. Redouté

Rosier des Indes jaune

Bosser

Rose 'Thé Hyménée'

Rosaceae

A China rose with Common Blue and Small Copper butterflies.
For details of the rose illustrated here, see plate 89.

PLATE 91 labelled *Bengale Thé hyménée*



Bengale Thè hyménée.

P. J. Redouté.

Vicor.

Rosa × *odorata* ‘Sulphurea’ and
Rosa × *odorata* (Andrews) Sweet

Rosaceae

The history of these old Chinese roses is given on pages 200, 202.

PLATE 92 labelled *Variétés de Rose jaune*
et de Rose du Bengale *Rosa lutea* & *Rosa Indica* (Var)



Variétés de Rose jaune et de Rose du Bengale

P. J. Redouté.

Rosa laeta & Rosa Indica (Var.)

Langlois.

Geum chilense Lindley

Rosaceae

This *Geum* takes its name from its country of origin, Chile, from whence it was introduced into Britain in 1826. It was found on the island of Chiloé, in southern Chile, and is sometimes called *G.chiloense* Balb. The true *G.coccineum* Sibth. & Sm. is native to mountains of the Balkan Peninsula and Turkey. *G.chilense* has given rise to several cultivars, and these will provide colourful flowers from early summer to autumn. They will thrive in good fertile soil in sun or semi-shade, and may be propagated by division of the clumps in spring.

Two popular strains, easily raised from seed, are available today: 'Lady Stratheden' (yellow) and 'Mrs Bradshaw' (red); there are also some hybrids, notably 'flore pleno' (scarlet double), of which 'Mrs Bradshaw' is a form.

PLATE 93 labelled *Bénoite écarlate*

Geum coccineum



Bénoîte écarlate.

P. J. Redouté

Geum coccineum.

Chapuy.

Lathyrus latifolius Linnaeus

Leguminosae

This perennial is often called Everlasting Pea, because it is such a long-lived plant in contrast with the annual Sweet Pea (*L. odoratus*). *L. latifolius* is native to bushy places in continental Europe but is more commonly seen as a garden escape by roadsides and railways or in urban waste ground. It is commonly naturalized in England and in North America.

The usual pink flowers are rather harsh in colour, but there is a variety with paler flowers and also a white-flowered variety which is most beautiful and much sought after by gardeners. The closely related narrow-leaved Everlasting Pea (*L. sylvestris*) is native to England, being found on hedge banks, the edges of woods, and on coastal shingle. It has narrow leaves and flowers of a more subtle flesh pink. Both species are easily grown from seed and thrive in any good garden soil.

PLATE 94 labelled *Gesse à larges feuilles*

Lathyrus latifolius



Gesse à larges feuilles.

Lathyrus latifolius.

P. J. Redouté

Victor

The Sweet Pea, *Lathyrus odoratus*, has been grown in gardens in northern Europe since the seventeenth century. By Redouté's time gardeners had forgotten its country of origin, which is Sicily and southern Italy, the colour in the wild usually purple. It is naturalized in other parts of central and southern Europe, and in California.

Both the varieties shown here by Redouté are still grown today; the deep mauve and blue is called 'Lord Nelson', the pink and pale pink 'Painted Lady'. They have been kept in cultivation because of their strong sweet scent, alongside the larger-flowered modern varieties and the recently introduced dwarf strains.

The first sweet peas to arrive in England were probably those sent to Dr Robert Uvedale of Enfield by Francesco Cupani (1657–1711), a monk living in Sicily, in 1699, although the plant had already been recorded by John Ray in his *Historia Plantarum* (1686) as a sweet-scented pea from Sicily.

The breeding of sweet peas, which resulted in the large-flowered varieties available today, was begun in about 1870 by Henry Eckford (1823–1905), a Scots gardener who became a nurseryman at Wem, Shropshire in 1888 and who produced many self-coloured varieties. Not long before 1900 the variety 'Prima Donna' gave rise to mutants with waved and frilled edges. One of these raised by W. J. Unwin was named 'Gladys Unwin'. Another, named 'Countess Spencer', was raised by Silas Cole, head gardener to Earl Spencer at Althorp. From these two have come the 'Spencer' sweet peas. They have larger flowers with frilled edges, in shades that include white, purple and red, and are four or five on each stem, but they have lost something of their original scent.



Pois de senteur.

P. A. Redouté.

Lathyrus odoratus.

Langlois.

Platylobium formosum Smith

Leguminosae

Platylobium is an Australian genus of slender shrubs up to five feet high with yellow or orange broom-like flowers, which ranges from Queensland to Tasmania. Of the four species, the one shown here, *P. formosum*, came from Botany Bay in New South Wales, and was cultivated in the Malmaison garden of the Empress Josephine in 1800. It grows well in a cool greenhouse, as it needs protection from frost, and flowers in the spring.

PLATE 96 labelled *Platylobium*



Platylobium.

P. J. Perlongi

Bacini

Baptisia australis (Linnaeus) R. Brown Leguminosae

Baptisia australis is a hardy herbaceous perennial native to the eastern United States. The common name, false indigo, derives from the former use of some species as a substitute for indigo; hence also the generic name, from the Greek *bapto*, 'to dip' and so to dye.

Baptisia has been cultivated in England since the eighteenth century, and is a beautiful plant for the herbaceous border. In its natural habitat it is found chiefly on river banks and therefore prefers deep moist soil. The flowers appear in June, and the seed pods can be dried for flower arranging. Propagation is by seeds or by division of the woody roots.

PLATE 97 labelled *Podalyria Australis*



Pedalypria Australis.

P. J. Redouté.

Victor.

Cadia purpurea
(G. Piccioli) Aiton

Leguminosae
(Caesalpinaceae)

This is a bush or small tree, native to tropical Arabia, Somalia and Ethiopia, but it does not seem to have survived long in cultivation. The generic name proposed in 1796 by Desfontaines and used by Redouté commemorates his teacher, Gerard van Spaendonck (1746–1822), a Dutch artist who was appointed teacher of flower painting at the Jardin du Roi in 1780, two years before Redouté himself arrived in Paris. It was van Spaendonck who first employed the technique of using pure watercolour on vellum to achieve remarkable delicacy of tone, and apparently translucent petals. As Wilfrid Blunt noted after a study of the *velins* in Paris, ‘Redouté was in fact the populariser and exploiter of van Spaendonck’s technical discoveries’. The name *Spaendoncea* (1796) is antedated by *Cadia* (1775).

PLATE 98 labelled *Spaendoncea tamarandifolia*



Spaendeneea tamarandifolia.

P. J. Redouté

Langlois

Punica granatum Linnaeus

Punicaceae

The pomegranate is thought to be a native of western Asia, but it is now naturalized in the Mediterranean region, South America, and elsewhere, and is widely cultivated in the tropics and subtropics. The fruit is eaten raw and the juice is used in cool drinks; the seeds can be made into jams or syrups.

The pomegranate has been known to man since time immemorial; references to it are found from the time of the ancient Egyptians and the Babylonians. Both the fruit and flowers are frequently portrayed in ancient Middle Eastern art, and many of the myths of the Mediterranean world revolve around it. It was widely regarded as a symbol of fertility, possibly because of the large number of seeds contained in the fruit. The Phoenicians took it from western Asia to Carthage, where the Romans first became acquainted with it, whence their name *punicum malum* for the fruit and *punica arbor* for the tree.

The pomegranate, a deciduous shrub or small tree, can be grown outside in Britain for its brightly-coloured flowers, but even when given the protection of a south-facing wall the fruit will seldom ripen. In California it grows and ripens easily.

In addition to the species there are a number of named varieties with white or red, single or double flowers, and a dwarf mutation, 'Nana', which is a common pot plant.

PLATE 99 labelled *Grenade*

Grenadier punica



Grenade.

P. J. Redouté.

Grenadier punicea.

Victor.

The *Fuchsia* illustrated here appears to be the Chilean and Argentinian *F. magellanica*, not the Brazilian *F. coccinea* Dryander. Guillemain records that the plant was introduced to France from Chile about 1788, and had become, by the time of writing (1833), very common in gardens, and he suggests that the illustration here is of *F. gracilis*, now considered a variety of *F. magellanica* (var. *macrostema*) and first introduced to England in 1822. In its South American home *F. magellanica* grows in marshy places, being a moisture-loving species, and it thrives luxuriantly in the west of Ireland where it makes hedges and sometimes runs wild.

F. coccinea and *F. magellanica* were often confused in the past. *F. coccinea*, a native of Brazil, often known as *F. montana*, is recorded as having been introduced to Kew from Lisbon in 1789 by a Captain Firth. It is generally similar to *F. magellanica* but differs in its minutely hairy twigs, shorter calyx tube, and in being almost a climber, throwing stems up to ten feet or more; it has become very rare in cultivation.

The name *Fuchsia* commemorates Leonhart Fuchs (1501–66), a much esteemed Bavarian physician and professor of medicine and the author of *De Historia Stirpium* (Basel, 1542), one of the first books with realistic woodcut illustrations of plants wild or cultivated in Germany. His delight in the study of plants is evident from his statement that ‘there is nothing in this life pleasanter or more delightful than to wander over woods, mountains, plains garlanded and adorned with flowerlets and plants of various kinds and most elegant as well and to gaze intently upon them.’



Fuchsia carlate.

Fuchsia coccinea.

This hybrid *Pelargonium* originated in the nursery of Thomas Davey (d. 1833) in the King's Road, Chelsea, in 1819, probably from the red *P. fulgidum* of the western Cape crossed with some large-flowered species such as *P. cucullatum* from near Cape Town, or a hybrid such as *P. × barringtonii*. Around this time seeds of many species of *Pelargonium* were being sent back from South Africa and grown by nurserymen and amateurs around London, and they raised and named many hybrids. Very few of them exist today. Hybrids of this type were the forerunners of the still popular Regal Pelargoniums, so-called because they were introduced to the public from the Royal gardens at Sandringham around 1877.

The Greek name *gēranion*, used by Dioscorides in the first century AD, derives from *gēranos*, 'crane', in allusion to the long beak of the fruit before it breaks apart, whence the English name 'cranesbill'. Linnaeus in 1753 included in his genus *Geranium* thirty-nine species, of which twenty were African, and covered plants now placed in the genera *Geranium*, typified by the hardy European *G. sylvaticum* L., *Erodium* and *Pelargonium*, which is an almost exclusively African genus with about 300 species and which is still commonly though no longer correctly called 'geranium'. L'Héritier, who separated these three genera in 1789, coined the name *Erodium* from *erōdios*, 'heron', and *Pelargonium* from *pēlarguos*, 'stork', thus maintaining an association of the group with long-beaked wading birds.



Geranium.

P. J. Redouté.

Varicté.

Bessin.

A native of South America, the common nasturtium, *Tropaeolum majus*, was probably introduced to Europe about 1684, long after the introduction of *T.minus* for which the earlier authors used the name *Nasturtium Indicum*, 'Indian Cresses'. Linnaeus's predecessor Joseph Pitton de Tournefort (1668–1708) in 1700 gave them the generic name *Cardomindum*. Linnaeus rejected this as too like *Cardamine* and coined in 1737 a new name *Tropaeolum* from the Latin *tropaeum*, Greek *tropaion*, 'monument of victory', and the diminutive ending *-olum*. After a victory the Romans sometimes set up a tree-trunk on the battle field and hung it with captured shields and helmets. Gardeners in Linnaeus's time used to grow *T.majus* up pyramids of poles covered with netting and Linnaeus with his lively imagination compared this in his *Hortus Cliffortianus* (1738) to such a Roman trophy, the rounded peltate leaves suggesting shields and the yellow and red flowers blood-stained golden helmets. Garden Cress being known as *Nasturtium hortense*, the *Tropaeolum* was called *Nasturtium Indicum*, because both *T.majus* and *T.minus* have rather peppery-tasting leaves that were (and still are) used in salads; the flowers can also be eaten, as can the young fruits, which may be pickled and used as a substitute for capers. Both Parkinson and Tradescant mentioned 'Indian cresses', but these are likely to have been *T.minus*, which had been introduced earlier – in 1585. Until the nineteenth century the Latin name *Nasturtium* (literally 'nose-twist', from *nasus*, 'nose'; *tortus*, 'twisted') was used for all types of cress, but later became restricted botanically to watercress, *Nasturtium officinale* R. Brown (now *Rorippa nasturtium-aquaticum*).

PLATE 102 labelled
Tropaeolum majus Var.

Capucine mordorée



Tropaeolum majus Var.

P. J. Redouté

Capucine morderie.

Gentiana acaulis Linnaeus

Gentianaceae

This gentian is the epitome of the Alpine flower, with its brilliant deep blue trumpets of almost velvet texture and green spotted throat. Several closely related species form the *acaulis* group: *G. acaulis* in a narrow sense (*G. kochiana*) found on non-calcareous mountains, *G. clusii* and *G. occidentalis* found on calcareous mountains and the '*G. acaulis*' of gardens, Farrer's *G. gentianella*, earlier named *G. excisa* by C. Presl, which does not precisely agree with these wild species. They occur in alpine meadows from the Sierra Nevada in southern Spain eastwards to Bulgaria and western Russia, some on acid rock, others on limestone.

The cultivation of the garden *Gentiana acaulis* has always aroused controversy. In some gardens it seems to grow easily, flowering freely, making large healthy patches and even seeding itself. In others, despite every care lavished on it, it grows poorly and produces only the odd flower, or even grows well without flowering. It requires a rich but well-drained soil, enriched with peat or leafmould, full light – but not too hot a position – and in winter protection for the developing buds from exceptional frost, wet and slugs.

PLATE 103 labelled *Gentiane sans tige*

Gentianae acaulis



Gentiane sans tige.

P. J. Redouté

Gentiane acaule.

L. J. Redouté

Catharanthus roseus (Linnaeus) G. Don Apocynaceae

The Madagascar Periwinkle, originally called *Vinca rosea*, did indeed originate in Madagascar, although it is now found growing wild throughout the tropics, seeding abundantly and naturalizing so readily that its provenance has often been incorrectly stated. There are seven species of *Catharanthus* endemic to Madagascar and one species, *C. pusillus* (Murray) G. Don, in India. *C. roseus* is native to the extreme south of Madagascar, the region where the French established a trading settlement, Fort-Dauphin, in 1643; it was mentioned in a description of Madagascar in 1658 by Etienne de Flacourt, who resided at Fort-Dauphin from 1648 to 1655, and evidently from here seeds were sent to the Jardin des Plantes in Paris about 1755 or earlier. Shortly afterwards Philip Miller, curator of the Chelsea Physic Garden, grew them successfully and in 1757 published the first illustration. Linnaeus named it *Vinca rosea*, but some thirty characters distinguish *Catharanthus* from *Vinca*, the northern periwinkles.

In the tropics *C. roseus* can make a bush up to six feet tall, but is usually up to about two feet. In addition to the typical form with a pink flower, there is also a white form with a pale greenish eye (*f. albus*), or a reddish eye (*f. ocellatus*) as shown here. This species having a reputation in Jamaica for the treatment of diabetes, extracts of the dried leaves were tested on rats at the Cancer Research Centre, Vancouver BC in 1950; they did not affect the blood sugar but depleted white blood cells with a lethal result. They were then found in limited doses to have an anti-tumour effect. The enormous amount of chemical and clinical research on this widespread ornamental plant has led to the detection of some seventy-five distinct alkaloids in it, hence its very poisonous nature, and several of these are now widely used in the medical treatment of various forms of cancer, notably Hodgkin's Disease; they can have unpleasant side effects but are authoritatively described as 'among the most valuable agents used in cancer chemotherapy'.

PLATE 104 labelled *Pervenche*



P. J. Redouté.

Lervenche.

Victor

The common oleander, *Nerium oleander* (sometimes also called rose bay) is native to the Mediterranean region, and, with its varieties, is a very popular shrub in warm temperate and sub-tropical regions. It thrives in California, where it is widely used as a hedge on the central reservations of motorways, but can be grown outdoors only in the very mildest parts of Britain. Although oleanders can be cultivated almost anywhere with a suitable mild climate, in the wild they occur only along the banks of streams and the seasonally dry beds of water-courses, in their ecology thus resembling the oriental plane (*Platanus orientalis*). The factor limiting their occurrence seems to be the need for surface water at a critical stage in the development of the seedling. The ancient Greeks noticed this association of the oleander with water as is evident from their name *nerion* (from *neron*, 'water'); they also called it *rhododaphne* and *rhododendron* with reference to the rose-coloured flowers of the wild plants.

Flowers can be single or double, and are white, cream, pink, pale orange or red, appearing from June to October. All parts of the oleander are extremely poisonous, the leaves being fatal to animals and the twigs to humans unwise enough to stir their tea with them, as happened once with dire results. Propagation is by cuttings, which should be taken in summer, or by seed. Scale insects are a particular problem, especially on greenhouse specimens, but they can be removed from the leaves by wiping them with a mixture of paraffin and soap flakes.



Nerium.

P. J. Redouté.

Laurier Rose.

Langlois.

Although often known as *Jasminum officinale* var. *grandiflorum* and sometimes as Catalanian, Spanish or royal jasmine, this differs from the ordinary white or poet's jasmine not only in having larger flowers but a looser inflorescence with longer pedicels. Its provenance was long uncertain, since it is widely cultivated in warm temperate and subtropical regions, but is now known to grow wild in Arabia, with a closely related subspecies *floribundum* also in East Africa from Sudan to Kenya. Its fragrance being much appreciated, it was taken westward by the Arab conquerors of North Africa, Sicily and Spain, where its presence, like that of *Iris albicans*, is evidently a relic of the long Moorish occupation.

Unlike *J. officinale*, this species requires glasshouse cultivation as a protection against frost.

The scientific name *Jasminum* is a latinized form of the Persian *yāsamin* or *yāsmīn*, a name adopted by the Arabs, from which the English names 'jessamine' and 'jasmine' are derived.



Jasmin d'Espagne.

P. J. Redouté.

Jasminum grandiflorum.

Langlois.

The common lilac is a native of the mountainous areas of eastern Europe, but was introduced into western Europe during the sixteenth century. Parkinson in 1629 called it '*Lilac sive Syringa caerulea*. The blew Pipe tree': he was also familiar with a white variety which he called '*Syringa flore lacteo sive argenteo*. The silver coloured Pipetree'. The heavily scented pale mauve flowers have ensured the popularity of this shrub over the centuries, and today there are a large number of cultivars, with single, semi-double or double flowers available.

Many lilac cultivars were bred by Victor Lemoine of Nancy in the 1870s, who, by crossing *S. vulgaris* with *S. oblata*, obtained earlier-flowering, double varieties. Flower colour in the cultivars ranges from white through pink and mauve to purple; the flowering season extends from late April to the end of June.

The Ancient Greek word *suriggias*, Latin *syringia*, was used by Theophrastus and Pliny for a hollow reed good for pipes and gave rise to the French *seringue* and English *syringe*, their ultimate base the Sanskrit *surunga* 'tube'. In the sixteenth century, when many plants from the Balkan Peninsula came into cultivation, the name *syringa* became applied to two totally different shrubs with a soft pith easily removed from their shoots. Clusius in 1601 included both under the heading *Frutex coronarius*. He called *Syringa vulgaris* the shrub with white rose-like flowers now named *Philadelphus coronarius* or mock-orange but still popularly known as 'Syringa' and *Syringa caeruleo flore* the shrub with lilac tubular flowers now named *Syringa vulgaris* or Lilac. This has resulted in the confusing use of *Syringa* as a botanical name for the lilac and 'Syringa' as a vernacular name for the mock-orange.

Lilacs are easy to grow in any good garden soil in sun or semi-shade. They dislike being transplanted, and for this reason it is wisest to do so only in the autumn, removing the majority of the flowers which appear during the first season after replanting. Lilacs can be propagated by cuttings, or by grafting onto common privet or *S. vulgaris* stocks; the disadvantage of the latter is that suckers often appear and may overwhelm the desired cultivar.

PLATE 107 labelled *Lilas*



Lilas.

P. J. Redouté.

Lapointe

This species of Thorn Apple is now found all round the tropics, but originated in Asia. It is an annual and makes a large bushy plant up to about four feet high and across. The fruits are normally spiny, but the plant shown here appears to be the smooth-fruited mutant. A similar smooth-fruited mutant is also known in the common Thorn Apple or Jimson weed, *Datura stramonium* L.

The name *Datura* used by Garcia da Orta (c.1500–c.1568) in 1563 is a variant spelling of the Hindi *dhatura*, derived from Sanskrit *dhustura*. The whole plant contains alkaloids producing delirium, somnolence or even death. Hence the powdered seeds introduced into foodstuffs and drink were used in India by unfaithful wives to drug their husbands conveniently for hours and by robbers and thugs to stupefy unwary travellers, as recorded by sixteenth-century and later authors.



Datura à fruit lisse.

Datura Lewis.

Ipomoea purpurea (Linnaeus) Roth Convolvulaceae
(*Pharbitis purpurea* (Linnaeus) Lunell)

This annual Morning Glory, usually with deep-blue flowers, is commonly grown in the warmer parts of Europe and North America. With its hairy twining stems it makes a dense curtain of dark green leaves set with blue flowers that become purple by the afternoon before they fade.

I. purpurea is native to tropical America, and has been grown in Europe since 1629. In cooler climates, a similar but glabrous species, *I. rubrocaerulea*, with paler leaves and sky-blue flowers, is commonly grown as an annual, either in a pot indoors or planted out in summer.

Redouté incorrectly labelled this plate 'Quamoclit'. *I. quamoclit* L., now often called *Quamoclit pinnata*, is a much more delicate plant with small, bright red flowers and pinnate leaves with filiform lobes, now common in the tropics and subtropics.

PLATE 109 labelled *Ipomoea Quamoclit*



Ipomoea Quamoclit.

Convolvulus tricolor Linnaeus

Convolvulaceae

Convolvulus tricolor is a low-growing annual or short-lived perennial less than 24 inches high which is a native of Spain, Portugal, southern France and Greece, with a subspecies *cupanianus* in Sicily, where it can be so common that it colours the hillsides blue. It is often portrayed in sixteenth-century Dutch flower-paintings and is commonly cultivated in gardens in Britain and throughout Europe, often being used in bedding-out schemes. The name *tricolor* refers to the three colours of the flower, with a yellow centre, a median white ring and conspicuous blue outer part – but there are a number of cultivars available today which have different coloured flowers, for example ‘Crimson Monarch’ (cherry-coloured), and ‘Sky-Blue’, as well as a plain white form. ‘Royal Ensign’ is probably the most popular variety, and is very similar in colour to the original species.

C. tricolor will grow in any ordinary, well-drained soil, and prefers a sunny position. By removing the seed heads regularly, a succession of flowers will be obtained. Seed should be sown either under glass in March or outdoors in April.

PLATE IIO labelled *Liseron*

Convolvulus tricolor



Liscron.

P. J. Redouté.

Convolvulus tricolor.

Chapoy.

This pretty, trailing phlox is found wild in open woods in eastern North America, but is frequently grown in rock gardens both there and in Europe, where it flowers in late spring.

It was first found by John Fraser (1750–1811) in Georgia in 1787, and living plants were brought back to Europe in 1801 from his sixth voyage to North America with his son. According to *Curtis's Botanical Magazine*, 'This last voyage was undertaken in consequence of an ukase of their late imperial majesties the Emperor and Empress of all the Russias, appointing him their Botanical Collector. We trust that so much zeal will meet with a due reward.' John Fraser was a Scottish draper who came to London and, encouraged by William Forsyth of the Chelsea Physic Garden, became a plant collector; in 1795 he established a nursery at Sloane Square, Chelsea, for his North American introductions. This phlox was named *Phlox stolonifera* by Sims in 1802 and *P. reptans* by André Michaux in 1803 in his posthumous *Flora Boreali-Americana*. Fraser and Michaux travelled together for a time in 1787 and hence came across the same plants. The two specific epithets refer to the creeping shoots (stolons).



Phlox Reptans

P.J. Redouté

Victor

This beautiful Water Forget-me-not, long known as *Myosotis palustris* (L.) Hill, is a common wild plant along rivers and streams throughout the British Isles and Europe eastwards to India, and is naturalized in northern parts of North America. The usually cultivated garden forget-me-not is a form of *M. sylvatica*, and is a biennial or short-lived perennial with a tufted habit of growth, whereas *M. scorpioides* is a perennial, which soon spreads to form a mat of stems, pieces of which can be easily separated to make new plants. Loose shoots also form a means of propagation in the wild as they can become detached by floods and float downstream to take root where they are washed up.

The beautiful large pale blue flowers are produced over a long season, from May to September, and the plant grows easily in rather damp soil in sun or partial shade. The English name 'Forget-me-not' provides an interesting example of the transfer of a vernacular name from one plant to another. In 1879 R. C. Alexander Prior in his *On the Popular Names of British Plants* stated 'FORGET-ME-NOT, a name that for about fifty years has been assigned to a well-known blue flower, a *Myosotis*, but which for more than 200 years had in this country, France and the Netherlands, been given to a very different plant, the ground-pine, *Ajuga Chamaepitys*, on account, as was said, of the nauseous taste that it leaves in the mouth. It is to this plant exclusively that we find it assigned by Lyte, Lobel, Gerard, Parkinson and all our herbalists from the middle of the fifteenth century, and by all the botanical authors who mention the plant . . . until it was transferred with the pretty story of a drowned lover. This had always been called in England Mouse-ear Scorpion-grass. In Germany, Fuchs in his *Hist. Plant.* (Basel, 1542) gives the name *Vergiss nit mein* to the *Teucrium Botrys*, L.' However, the name *Vergiss mein nicht* seems also to have applied in Germany to *Myosotis scorpioides* and its equivalent has come into popular use in most European countries for this species.

PLATE II2 labelled *Le ne m'oubliez pas*
ou *Vergissmeinnicht*

Myosotis scorpioides



*Le ne m'oubliez pas
ou Vergissmeinnich.*

P. J. Redouté.

Myosotis scorpioides.

Langlois.

Heliotropium corymbosum

Ruiz & Pavon

Boraginaceae

This beautiful species of Heliotrope was described by Ruiz and Pavon in their *Flora Peruviana et Chilensis* 2:2, pl. 107 (1799), but was not introduced into gardens in Europe until 1808. Its beautiful large flowers are sadly not scented, but garden hybrids have been introduced, with the scented but smaller-flowered *H. peruvianum* as the other parent. These hybrids were much grown in Victorian conservatories, carefully trained as standards or on a trellis, and were, and still are, used as summer bedding plants. They need to be kept indoors in winter as they are killed by even slight frost, preferring to be kept at temperatures above 50°F, 10°C.

PLATE 113 labelled *Heliotropium Corymbosum*



Heliotropium corymbosum.

P. J. Redouté

Langlois.

The yellow Monkey Flower is now so common along rivers and streams and by springs throughout the British Isles, but especially in Scotland, that it is hard to believe that so well established a plant is not native but was introduced to Europe from the Pacific Coast of America in the early nineteenth century. It is also introduced in eastern North America. Two species, both very similar and often hybridizing, have been confused under the name *M.luteus*. *M.guttatus* with glandular hairs on the inflorescence and small spots on the flowers, a native of Mexico and California north to Alaska, was introduced in about 1806 by Georg H. von Langsdorff (1774–1852), the surgeon and naturalist on the Russian voyage around the world under A. J. von Krusenstern in 1803–6, who collected seed on the island of Unalaska, one of the Fox Islands. Seed was also sent back from California and Nootka Sound on Vancouver Island by Archibald Menzies (1754–1842), the Scottish surgeon and naturalist who accompanied George Vancouver on his voyage in 1790–95.

The second species, *M.luteus* Linnaeus, is rarer, with no hairs on the inflorescence and usually large blotches of red on the flowers. It grows in similar places to *M.guttatus*, but in the southern hemisphere, and was first collected by Father Louis E. Feuillée, a French priest in Chile in 1707, and described in his *Histoire des Plantes médicinales ... du Pérou et du Chily* (1714–25).



Mimulus.

Antirrhinum majus Linnaeus

Scrophulariaceae

The snapdragon, *Antirrhinum majus*, has long been grown in English cottage gardens; in 1629 John Parkinson described white, purple, reddish and yellow forms as 'nourished with us in our Gardens'; and in 1656 John Tradescant the younger listed nine kinds in his collection at South Lambeth, London.

A short-lived perennial (often treated as an annual or biennial), this snapdragon is a native of the western Mediterranean region, but is naturalized in Britain, and in parts of central and eastern Europe, where it grows on old walls and buildings. In California it grows wild on waste ground. In the wild it is normally a reddish-purple colour (rather as shown here) but is sometimes a creamy-white; today there are many different forms available, varying both in colour and height, some resistant to antirrhinum rust (*Puccinia antirrhini*).

Snapdragons will grow in any well-drained garden soil, but prefer a sunny position. They can also be grown as pot plants in a slightly heated greenhouse.

PLATE II5 labelled *Muflier à grandes fleurs*

Antirrhinum



Plufler à grandes fleurs.

Antirrhinum.

P. J. Redouté.

Streptocarpus rexii (Hooker) Lindley Gesneriaceae

The genus *Streptocarpus* is largely confined to eastern and southern Africa where the main types are to be found: subgenus *Streptocarpus* comprising stemless plants usually with large flowers such as that illustrated here, and subgenus *Streptocarpella* with branching stems, small opposite leaves and smaller flowers, which are found also in Asia. The stemless group is purely African and is further divided into more or less perennial species with several leaves, and monocarpic species with a single large leaf, where the whole plant generally dies after flowering. *S. rexii* belongs to the former group and, though not now itself grown, has given rise to the large-flowered *Streptocarpus* usually grown today, as well as to the smaller-flowered 'Constant Nymph' and its siblings.

Streptocarpus rexii is native to southern Africa from the eastern part of Cape Province eastwards into Natal. Most species of *Streptocarpus* grow on south-facing rocks or on mossy tree trunks in open forest.

The name *Streptocarpus*, from Greek *streptos* (twisted) and *karpos* (fruit), refers to the spirally twisted capsule.

PLATE II6 labelled *Gloxinie* Var.

Gloxinis Var.



Glycerinia Var.

P. J. Rodoué.

Glycerinia Var.

Langlois.

Tecomaria capensis
(Thunberg) Spach

Bignoniaceae

Tecomaria capensis, as it is now called, was introduced to Kew by seed sent from the Cape of Good Hope by the Kew gardener and plant collector in Brazil and South Africa, James Bowie (commemorated by the succulent genus *Bowiea*), in 1823. It must have grown well, for by 1827 it was illustrated both by Redouté and in the *Botanical Register*.

Tecomaria capensis can tolerate a few degrees of frost, and is commonly grown in warmer climates such as California where it makes a loose shrub or hedge, with a long flowering period. In a greenhouse it can be grown easily, either planted out or in a large pot which can be moved outdoors in summer. Propagation is by either seed or cuttings.

The red flowers are typical of the family Bignoniaceae, and are often bird-pollinated – in South Africa by sunbirds. The name indicates a resemblance to the genus *Tecoma*.

PLATE 117 labelled *Bignonia capensis*



Bignonia Capensis.

Campanula rotundifolia Linnaeus Campanulaceae

The Harebell or Blue Bell (in Scotland) is found over much of Europe and North America, growing in short grass on both acid and limestone hills, rocks, on dunes and lake shores – anywhere that the soil is poor.

The Latin epithet *rotundifolia*, ‘round-leaved’, may seem inappropriate for a plant with such narrow leaves on the stem, but the lowest leaves (not shown here) are rounded or triangular. The species is extremely variable and attempts by botanists to divide it into minor species, subspecies and varieties have bestowed upon the group a great number of scientific names. The generic name *Campanula* was coined by Leonhart Fuchs in 1542 as a diminutive of the Late Latin *campana*, a flower so like a little bell being so unusual among European plants that most of its vernacular names refer to this, e.g. bellflower, ding-dong, fairy bell, heath bell, sheep bell, or to a thimble which is likewise apt, e.g. fairy thimble, lady’s thimble, witch thimble.

Harebells are almost always pale blue, but in parts of Scotland the blue seems more intense; white ones are also found occasionally. Various cultivars have been grown in the past, such as double, and the semi-double ‘Soldanelliflora’. They are not difficult to grow, given well-drained soil in full light, and once established are surprisingly tolerant of drought.

PLATE 118 labelled *Campanule Clochette*



Campanule Clochettes.

P. J. Redouté.

Victor

Campanula trachelium Linnaeus

Campanulaceae

This campanula is found wild in woods and hedges in Europe, including England where it is called Nettle-leaved Bellflower or Bats-in-the-Belfry. It is common in some areas in southern England, especially on the chalk downs of Kent, Surrey and Sussex. In Europe it ranges from Norway and Sweden south to Greece and Sicily. The closely related Great Bellflower, *C.latifolia*, is a larger, more upright plant with paler flowers and leaves which taper into the stem, whereas those of *C.trachelium* are rounded or subcordate at base. *C.latifolia* is commoner in northern England and Scotland, and is found in central and eastern Europe. Nettle-leaved Bellflower is not much grown in gardens today, but some cultivated varieties have been recorded, for example a double lilac form, 'Bernice', a single white, a double white, and 'Caerulea Plena', a double blue.

PLATE II9 labelled *Campanule gantelée*

Campanulla



Campanula gautetii.

P. J. Redouté.

Campanula.

Langlois

Lonicera caprifolium Linnaeus

Caprifoliaceae

This species of Honeysuckle is a climber rising to as much as 20 feet, found wild in eastern and southern Europe, and naturalized in southern England and eastern North America. It has sweetly-scented flowers in June and July, and succulent red berries, on a plant which scrambles over hedges and scrub or climbs into trees growing on the margins of woods.

Lonicera caprifolium may be distinguished from common honeysuckle, *L. periclymenum*, by its paired upper leaves being joined together at base, the stem growing through the middle, and by having only one whorl of flowers. *Lonicera* was named by Linnaeus after the German herbalist and naturalist Adam Lonitzer (1528–86).

L. caprifolium is not often grown today, having been replaced in gardens by its hybrid, *L. × americana*, of which the other parent is said to have been the Mediterranean species, *L. etrusca*. This has several whorls of flowers, which are reddish on the outside of the upper whorls, subtended only by small bracts, and flowers earlier.

PLATE 120 labelled *Chèvre-feuille*

Lonicera



Chèvre-feuille.

P. J. Redoute.

Lonicera.

Victor

Callistephus chinensis (Linnaeus) Nees Compositae

The Chinese Aster is an annual originating in northern China and long grown there and in Japan. It is half-hardy, and many different varieties have been raised, in Britain, France and the United States, which have eclipsed the popularity and ruined the grace of the wild species.

The wild plant has white single flowers, and was introduced into France in 1728 and thence to the Chelsea Physic Garden in London in 1731. Much breeding was done in the mid eighteenth century, and by the 1770s a number of single and double cultivars were becoming popular; later the Victorians favoured them as bedding plants.

Today there are numerous different strains, including Ball Type, Chrysanthemum Flowered, Duchess, Giants of California, Ostrich Plume and Queen of the Market among others. Growing to about eighteen inches in height, these varieties are suitable for use at the front of borders and are also used as pot plants; the daisy-like flowers are available in shades of white, pink, red and purple. China asters prefer well-drained soil and a sunny position; the large-flowered varieties require protection from strong winds and may need staking.



Aster de Chine.

P. J. Redouté.

Aster Chinensis.

Bessin.

Chrysanthemum carinatum Schousboe Compositae

This annual *Chrysanthemum* is native to North Africa, particularly Morocco, and was introduced into France around 1796 by Pierre M. A. Broussonet, professor of botany at Montpellier, who also sent seeds to Kew. It makes, when well grown, a bushy plant up to two or three feet high, flowering in early summer from seedlings raised in autumn, or later from seed sown in spring. The original flower colour was white and yellow with a dark purplish centre as shown here, but forms soon arose with red or purple rings; today varieties are available both with single or double flowers, and selected for one colour or a mixture of different colours.

PLATE 122 labelled
Chrysantheme caréné

Chrysanthemum carinatum



Chrysanthème caréné

P.J. Redouté.

Chrysanthemum carinatum.

Bessin

This species of *Coreopsis* was introduced to France in 1823, presumably from Philadelphia, Pennsylvania; Thomas Nuttall, who had discovered it in Arkansas and introduced it into cultivation, prophetically stated in 1821, when describing it as a new species, 'as an ornamental plant of easy culture and uncommon brilliance, it promises to become the favourite of every garden where it is introduced'. His *Coreopsis tinctoria* has indeed become a popular annual and has given rise to a diversity of forms. Thus in var. *atropurpurea* the red colour covers almost the whole ray; in var. *nana* the plant is 6–8 inches high instead of the usual 3 feet for a well-grown plant. The species has a wide distribution in southern Canada and the central states of the USA.

The name *Coreopsis* is derived from the Greek *koris*, 'bug', and *opsis*, 'resembling', alluding to the shape and colour of the 'seed'. The epithet *tinctoria* refers to the fact, as stated by its discoverer, that the flowers 'afford a yellow dye'



Coreopsis elegant.

P. J. Redouté

Coreopsis elegans

Langlois

Some twenty species of *Dahlia* are found in Mexico and Central America, all of which have tuberous roots. They were among the favourite garden plants of the Aztecs, who grew double-flowered hybrids as early as the sixteenth century.

The Spaniard Vincente Cervantes was the first to send *Dahlia* seed to Europe in 1789 when he dispatched a consignment to Cavanilles at the Royal Botanic Garden in Madrid. In 1791 Cavanilles described a semi-double purple form as *Dahlia pinnata*, dedicating this new genus to a Swedish botanist Andreas Dahl (1751–89), a pupil of Linnaeus. In 1794 two more single forms, also cultivated in Madrid, were named *D.coccinea* (red) and *D.rosea* (rose). All three were introduced into France, from where in 1802 *D.coccinea* was sent to England, flowering in the following year at Chelsea. These plants were subsequently lost, and in 1804 Lady Holland sent another batch of seeds from Madrid; from their seedlings, and later from *D.juarezii*, the cactus dahlia, were derived the early garden hybrids. (See also plate 125.)



Dalea simplex.

P. J. Redouté.

Dalea simplex.

Bosvin.

The majority of *Dahlia* cultivars are propagated vegetatively – that is, by division of the tubers or by cuttings. They will thrive in deep rich soil and a sunny position, but will tolerate only a few degrees of frost. In cold climates the tubers must be lifted in the autumn and stored for the winter in a cool, dry, frost-free place.

Today there are an enormous number of garden hybrids available commercially, of all shapes, sizes and colours; these are classified under many different headings, including pompon, cactus, dwarf, collarete, anemone-flowered, and peony-flowered.

It is unfortunate that, overlooking the existence of the genus *Dalea* named by Linnaeus in honour of the English physician, apothecary and botanist Samuel Dale (1659–1739), British gardeners usually pronounce *Dahlia* as ‘dalea’.



P. J. Redouté del.

Dahlia double

Langlois.

This annual daisy is native to central North America, from Arizona to Colorado and Nebraska, but is naturalized in other areas, notably California. In the wild it has yellow rayed florets with a red base, but cultivated forms may have red or tubular rays, or double flowers. Seed can be sown in late spring to flower in summer and autumn. A second species of *Gaillardia* is commonly cultivated, the perennial *G. aristata*, a native of Texas and neighbouring states. It has yellow and red flowers with three-lobed rays, and a race of hybrids between these two species contains named varieties such as 'Croftway Yellow', and 'Mandarin', a deep orange.

The genus is named after Gaillard de Charentonneau, an eighteenth-century French magistrate and amateur botanist.



Gaillardia

P. J. Redouté

Victor

The French Marigold, *Tagetes patula*, is a native of Mexico and was introduced to Britain about 1573, but by the sixteenth century it and other species were considered to 'growe naturally in Africa, and especially in the parts about Tunis, and where old Carthage stood', as stated by Parkinson in his *Paradisi in Sole Paradisus terrestris* (1629). He devoted a whole page to illustrating the different forms of the French Marigold, which he calls '*Flos Africanus*'. 'The great double French Marigold' he referred to as 'this goodly double flower, which is the grace and glory of a Garden in the time of his beauty', and said that it had 'the very smell of new waxe, or of an honie combe, and not of that poisonfull sent of the smaller kindes'. This plant is a half-hardy annual, and is much grown in gardens and public parks, where it is frequently used as part of 'bedding-out' schemes. There are many varieties available today, including double-flowered forms and some dwarf types. The flower colour is usually yellow, orange, or brownish-red.

French marigolds like well-cultivated soil, and a sunny site. Propagation is by seed, which should be sown under glass during March to April; the seedlings should be hardened off and planted out in late May.

Species of *Tagetes* are highly aromatic and the secretions from their roots are seemingly inimical to soil nematodes. In the Caucasus and elsewhere *T. erecta* L., the African Marigold, is cultivated as a flavouring plant. An oil used in perfumery is distilled from *T. patula* and *T. erecta*.



Tagetes.

P. A. Redouté

Ciller d'inde.

Berlin.

Helipterum eximium (Linnaeus)
De Candolle

Compositae

This striking 'everlasting' flower named by Linnaeus *Gnaphalium eximium* is native to South Africa, where it makes a low shrub up to about three feet high, the stems covered with overlapping woolly leaves and the striking flower heads produced in clusters of about ten or twenty. It was introduced into Europe in 1794, but has probably never been widely grown, and is certainly now very rare, if not unknown, in cultivation. It would require the same conditions as the Cape Heathers; light, well-drained soil, as much sun and air as possible, but protection from frost.

The genus *Helipterum* is now generally represented in gardens by *H. manglesii* (syn. *Rhodanthe manglesii*), an annual from Australia with pretty nodding flowers with pink or white bracts which keep their colour and shape well when dried.

PLATE 128 labelled *Gnaphalium esimium*

Gnaphale superbe



Gnaphalium coccineum

P. J. Redouté

Gnaphale superbe

Chapuy.

From archaeological evidence, e.g. faggots of long hazel rods used in prehistoric trackways across marshland and abundance of nuts and hazelwood charcoal in prehistoric settlements, it is evident that the hazel was very important in the Neolithic and Bronze Ages for food and objects made from shoots produced by coppicing. The medieval association of the hazel with fertility probably originated from opportunities for love-making during nutting, and the birth of babies nine months after that. Hazel rods are favoured for divining, a use introduced by German miners in the sixteenth century. Beliefs in the magical powers of hazel obviously go back to pagan times – Theophrastus and Pliny both refer to the hazel, *karua* in Greek, *corulus* or *corylus* in Latin; in more recent times a large number of varieties have been raised for their nuts.

Despite the fact that hazels grow throughout the British Isles, the only area where both cobs (illustrated here) and filberts (*C. maxima* Miller) are produced on a large scale is in Kent.

In the USA the main area of production is in Oregon, but most of the hazels put into chocolate nowadays are grown along the Black Sea coast of Turkey.

PLATE 129 labelled
Noisetier franc à gros fruits

Corylus maxima



Neisetier franc à gros fruits.

P. J. Redouté

Corylus maxima

Langlois

Ribes rubrum Linnaeus

Grossulariaceae

The redcurrant, *Ribes rubrum* L. (syn. *R. sativum* (Reichenbach) Syme, *R. domesticum* Janczewski), is a native of western Europe but has become extensively naturalized there and elsewhere. It is the parent of the cultivated varieties grown in gardens. Being a northern species, it appears to have been unknown in the warmer areas of southern Europe until the Middle Ages; the writings of the Greeks and Romans do not mention it.

Redcurrants thrive throughout the British Isles and are grown in kitchen gardens either as free-standing bushes, as cordons trained against walls, or as standard trees. All types of currant require well-drained but not dry soil, and prefer an open, sunny position; they will however also grow well in partial shade.

PLATE 130 labelled *Groseiller rouge*

Ribes rubrum



Groseiller rouge.

P. J. Redouté. — 3.

Ribes rubrum.

Langlois.

The classification and naming of the cultivated apples and their wild relatives have long been the subject of much study with, however, divergent conclusions. Following the treatment of the Russian F. D. Lichenos, *M.domestica*, *M.pumila*, *M.cerasifera*, *M.hupehensis*, *M.prunifolia* and *M.micromalus* should be regarded as variants of one species for which the earliest available name is *M.pumila* based by Miller in 1768 on the dwarfing paradise stock. If, however, the orchard apples are regarded as forming a group of hybrid origin distinct from the wild species, the earliest available name for this is *M.domestica* given by Borkhausen in 1803. It is to be distinguished from the crab apple, *M.sylvestris*, found wild in woodland, scrub and hedges in England, Wales and Ireland, and widespread on the European continent and western Asia. Remains of crab apples on archaeological sites belonging to the Neolithic, Bronze and Iron Ages in Britain, France, Switzerland and Italy testify to their extensive use by prehistoric man. Today there are many thousands of varieties of cultivated apples and although they differ in colour, shape and size of blossom, it is impossible to identify the variety from the blossom alone.

The history of the apple is somewhat obscure, due chiefly to its cultivation for so many centuries. Theophrastus and Pliny both knew of several forms, and it is generally reckoned that the Romans introduced both dessert and culinary varieties to Britain during their occupation. The natives of Britain had meanwhile probably developed their own source of apples, from wild trees, which they used to make a form of cider. In medieval times the cooking and eating apples were grown in monastic gardens, and by the end of the thirteenth century a number of varieties were well-known in Britain. According to H. V. Taylor in *The Apples of England* (1946), the first named variety of apple to be recorded in England was the 'English Pearmain', mentioned in 1204 in a deed concerning a holding in Norfolk; the fee of two hundred Pearmaines a year was payable into the Exchequer. Another ancient apple, the Costard, was recorded in 1296, while pippins did not appear in Britain until the sixteenth century. The German botanist Valerius Cordus (1525-44) described thirty named apples grown in Hessen and Saxony, which indicates the large number raised during the Middle Ages.



Fleurs de Pommier.

P. J. Redouté

Fleurs - Malus.

Chapuy

The cultivation of apples is very ancient (see page 284), and over a thousand cultivars are now distributed throughout the world. They differ according to the regions where they are grown, some varieties being better suited than others to a particular area. Such a one is 'Calville Blanc', which is better suited to slightly warmer climates than the British Isles; although it can be grown in England if given wall protection, it seldom ripens properly.

Also known as 'Calville Blanc d'hiver', this apple has been known since the end of the sixteenth century. It is still grown on the European continent, being ready to pick in mid-October.

H. V. Taylor, in *The Apples of England* (1936), describes 'Calville Blanche' (*sic*) as 'a very old French variety, much grown as a wall fruit in the gardens around Paris. It is esteemed very highly in Belgium, Holland, and especially in the Paris markets, where it makes high prices. At the beginning of the century small supplies were also sold at high prices in the London market in the spring. The Calville Blanche has, therefore, won for itself a place in the front ranks of dessert apples of Europe.'



Calville blanc.

The common pear, *Pyrus communis*, has been grown since ancient times; the Greeks and the Romans prized the fruit (Pliny mentioned thirty varieties), and it has been cultivated for many centuries in England. It is naturalized in England and Wales, and is native to Europe, Iran, Turkey, the Caucasus and Central Asia. There are many thousands of cultivated varieties today, a few of which are grown commercially.

‘Tarquin’, illustrated here, was described as a new variety in 1768 by Duhamel du Monceau in his *Traite des Arbres fruitiers*, but by 1869 André Leroy, in the *Dictionnaire de Pomologie*, was rather disparaging about its qualities, remarking on ‘son faible mérite’.



Poire Tarquin.

P. J. Rodoult.

1 cm.

Prunus cerasus Linnaeus

Rosaceae

Prunus cerasus L. (*Cerasus vulgaris* Miller), the sour cherry, is thought to be native of Western Asia. Little is known of its history in cultivation, but possibly it was used by the Romans as a grafting stock, later spreading throughout Europe and to North America. Today it is widely naturalized in Europe including Great Britain, and in North America, where it grows in hedges, usually making a shrub rather than a tree.

Sour cherry cultivars are divided into two groups, the Morellos with the flesh of the fruit red, and the Amarelles with the flesh yellowish, and some of these can be grown in colder climates than can the sweet cherry, although they will not thrive in frost pockets. Cherries prefer a well-drained soil.

PLATE 134 labelled *Cerisier Royale*

Cerasus domestica



Cerisier Royal.

P. J. Redouté

Cerasus domestica.

Langlois.

Prunus domestica, the edible plum, is found throughout most of Europe, being widely cultivated for its fruits. The date of its introduction to England is unknown, but it is thought that a number of varieties were introduced from France and Italy during the fifteenth century. *The Boke of husbandry*, first published in 1523 (reissued in many later editions) and written either by Sir Anthony Herbert or his brother John, remarks that 'It is necessarye, profytable, and also a pleasure . . . to have peares . . . apples of dyverse sortes. And also cheryes . . . dampsons, plummies, walnutties and suche other.' By the second half of the seventeenth century, a large number of books on the cultivation of fruit were published in England and France, a result of the popularity of orchards and the keen interest being taken in the improvement of fruit varieties of all kinds. Works such as *A desigine for plentie, by an universall planting of fruit-trees* (Anon. 1653), *La manière de cultiver les arbres fruitiers. . .* (Antoine Le Gendre, 1652), *A treatise of fruit-trees* (Thomas Hitt, 1755) and *The British fruit-gardener* (John Abercrombie, 1779) all point to the enthusiasm for fruit growing that was notable at this period.

Many varieties of plums were mentioned in books published during the eighteenth and nineteenth centuries, and in *The fruits and fruit trees of America* (1845) by A. J. Downing, one called 'La Royale' is described, which would seem to be the same as that illustrated here. Downing describes it thus: 'a French variety is undoubtedly one of the richest plums . . . and is remarkable for the exceedingly thick coat of bloom which covers the skin. The tree is a slow grower, forms a bushy, spreading head, . . . bears regularly, but moderately, and though not fit for the orchard, it is a first rate garden fruit.' According to Downing, the yellow flesh is very juicy with a 'rich vinous flavour', and the fruit is ripe at the end of August.



Prune Royale.

P. J. Redouté.

Prunus Domestica.

Langlois

The variety illustrated here is a form of greengage, itself a type of plum which owes its name to the fact that Sir William Gage (1695–1744) of Hengrave Hall, West Suffolk about 1725 imported some fruit trees from the monks of Chartreuse. Among them was a Reine Claude plum, of which apparently the label had been lost and which the family's gardener named Green Gage on account of its greenish colour.

The greengage is a slow-growing tree, with a rather spreading, low-growing habit. It bears fruit regularly, and can produce large crops, which are ripe about mid-August. It is best grown on a south-facing wall, where it will be protected from frost.

The name 'Reine Claude' is used in France for this type of gage, the story being that it was brought to France from Italy about 1500 by Queen Claudia, the wife of François I. The name 'greengage' has now become a general term in England for several well-flavoured yellow or yellow-green plums.



Reine Claude française.

P. J. Redouté.

Victor.

This variety of the common apricot, *Prunus armeniaca* L., was said by Guillemain to be the largest and most succulent and to have the best flavour, but he recorded no varietal name.

P. armeniaca is a native of northern China. It was unknown to Theophrastus (370–c.285 BC) who recorded many observations on Asiatic plants reported by officers on Alexander's military expeditions of 334–325 BC. Pliny and Columella mentioned it in the first century AD under the name *Armeniaca* implying its introduction from Armenia Major into Italy. The Arabs later cultivated it throughout the Mediterranean region, and it has been grown in English gardens since the fifteenth century, and possibly before. Parkinson in his *Paradisus* (1629) described six varieties of 'Apricocke', which he said was 'without question a kind of Plumme, rather than a Peach'.

Although the tree itself is hardy in open ground, the protection of a south or west-facing wall will provide the extra heat required for fruit production; apricots seldom bear fruit until they are three or four years old. The fruits are an important source of vitamin A, and have long been used in the production of jams and desserts; more recently, dried fruits have gained in popularity and are exported commercially from North Africa, California, and Syria. Cultivars commonly grown in Europe include 'Blenheim', 'Tilton' and 'Early Montgamet'.



Abricot Pêche.

D. J. Redouté.

Langlois.

The peach originated in China, according to Alphonse de Candolle in *L'origine des plantes cultivées* (1883), and it is still to be found growing wild there. Certainly peaches have been cultivated by the Chinese for many hundreds of years, and it is generally considered that they were introduced into Iran through the silk route in the first or second century BC, and thence to Armenia, Greece and Rome, Pliny mentioning them as *persica*, which indicates an Iranian source. The Spanish introduced them into Latin America during the sixteenth century, and in England, by the time of Queen Elizabeth I, many different peaches and nectarines were cultivated. During the seventeenth and eighteenth centuries, both peaches and nectarines were widely grown in France and England, and during the nineteenth century Thomas Rivers, a nurseryman from Hertfordshire, did much to produce improved cultivars by careful selection and breeding. The skin of the peach is covered with a close down of minute hairs.

The peach is hardy in Britain, but it needs light, deep soil and the protection of a warm wall; it can also of course be grown under glass. The blossom on trees grown outdoors needs to be protected from severe frosts and cold winds.

Although peaches were in the past grown commercially in Britain, the advent of cheap air freight and speedy overland transport has meant that most of those sold in Britain today are imported from Italy or California, and it is now unusual to see an English peach for sale.

Today there are over five hundred cultivars available, but probably the most popular for the amateur are 'Duke of York', 'Bellegrade', 'Early Alexander', 'Peregrine', 'Rochester' and 'Hale's Early' (which needs to be planted near another peach as it is not self-fertile).

PLATE 138 labelled *La Pêche*



La Pêche.

Prunus persica var. *nectarina*
(Aiton) Maximowicz

Rosaceae

The nectarine differs from the peach only in the smoothness of its hairless skin, like that of a plum, and the slightly different flavour. The name is thought to derive from 'nectar', the drink of the gods, to which this fruit has been compared because of its delectable flavour and texture. The connection of nectarines and peaches is evident from both hairless and downy fruits having been recorded as growing on the same tree, raised from a single seed. The origins and early history of the nectarine are not well documented, although it is generally considered that it occurred as a 'sport' on a peach tree, but it followed the same development in popularity as the peach, and was well known in France during the seventeenth and eighteenth centuries.

The nectarine is slightly less hardy than the peach. Cultivars available today include 'Armking', 'Cardinal', 'Early Rivers', 'Elruge' (a very old variety which was being grown in 1727), 'Gold Mine', 'Lord Napier' and 'Starwyck'.

The genus *Prunus*, typified by the plum, *Prunus domestica* L., is by some botanists broken into four genera: *Persica*, including the peach, then named *Persica vulgaris* Miller; *Amygdalus*, including the almond, then named *Amygdalus communis* Linnaeus; *Prunus* in a narrow sense, including the plum; *Armeniaca*, including the apricot, then named *Armeniaca vulgaris* Lamarck.

PLATE 139 labelled *Pêcher à fruits lisses*



Pêcher à fruits lisses.

Fragaria chiloensis (Linnaeus) Duchesne Rosaceae

The 'fraisier à bouquets' illustrated here is a variety of *F. chiloensis*, which was discovered on the coast of Chile and brought back to France in 1714 by Amédée François Frézier, a French naval officer and botanist of Scottish descent from Clan Fraser. The range of the species extends along the Pacific coast of America from Chile to Alaska. This large-flowered, large-fruited strawberry was illustrated by Frézier in his journal, published in 1717, and was infertile until it was later crossed with *F. virginiana* (a species from eastern North America) to produce the earliest version of our modern cultivated strawberry. During the nineteenth century much breeding and selection of strawberries was carried out in Europe; Thomas Andrew Knight (1759–1838) in England alone raised over four hundred different seedlings.

PLATE 140 labelled *Fraisier à Bouquets*

Fragaria



Fraisier à Bouquets.

P. J. Redouté

Fragaria.

Chapuis.

Rubus idaeus, the parent of the cultivated raspberries, is a species widespread in Europe, including Great Britain and Ireland, and northern Asia as far east as Japan.

William Turner in his *The Names of Herbes* (1548) recorded that 'raspes grow most plentuously in the woddes of east Frese-lande' but added that 'they growe also in certayn gardines of Englande'.

When later introduced into North America, however, it was found to be less well suited to the climate than the American native species, *R.occidentalis* and *R.strigosus*.

The modern varieties are divided into summer-fruited and autumn-fruited types, and many new cultivars have been bred for their heavy cropping and disease-resistant qualities. Raspberries do best in fertile, well-drained soil, and prefer shelter from winds.



Framboisier.

P. J. Redouté.

Rubus

Canadensis

The term 'citrus fruits' covers oranges, tangerines, lemons, kumquats, citrons, grapefruits, limes and crosses between some of these. The fruits are borne on small evergreen trees and shrubs, and flourish in mild climates such as Spain, Italy and Greece, parts of South America and the warmer areas of the USA such as California and Florida. Their ancestors originated in south-east Asia.

The fruits of citrus are technically called 'hesperidia', which derives from the Greek for the gardens of the Hesperides where the legendary 'golden apples' grew.

Although the classification of the citrus fruits is confused, most authorities agree that they should be divided into 'orange-type' and 'citron-type'. As far as one can tell, the specimen illustrated here is a type of grapefruit (an 'orange-type'), *Citrus* × *paradisi* (a hybrid between the sweet orange and the shaddock), although it could be a shaddock, *C. maxima* (*C. grandis*); the history of both is somewhat obscure, but the shaddock, 'Adam's apple', was grown in Spain in the twelfth century according to a Moorish writer in Seville, and Giovanni Battista Ferrari described a shaddock in his book *Hesperides* (1646). The name 'shaddock' is believed to refer to an East Indian sea captain, Captain Shaddock, who took seeds of this plant to the West Indies. Other common names for this citrus – pomelo and pummelo – probably arise from the name given it by the Dutch, *pompelmous*, hence the French *pamplemousse*.

The names *citrus* and *cedrus* (Greek *kedros*, 'cedar') have the same origin. According to Samuel Tolkowsky's learned and fascinating *Hesperides* (1938), the transfer of the name *citrus* from the cedar (*Cedrus libani*) to the citron (*Citrus medica*) originated in the substitution of the citron or *etrog* in the Jewish Feast of Tabernacles in 136 BC for the cedar-cone which had unwelcome associations with festivals of Bacchus (Dionysos).

PLATE 142 labelled *Oranger à fruits déprimés*



Oranger à fruits déprimés.

P. J. Redouté

Langlois.

Vitis vinifera Linnaeus var.

Vitaceae

This vine is thought to have originated in the Levant, and it was described in *Le Vignoble* (1825) by Mas and Pulliat. According to them the grape has long been of interest to viticulturists, because of its extraordinary shape and its antiquity, a Spanish Arab medical writer Ibn Beitar (Ibnu 'l-Baytar) having described the grape in an agricultural book published prior to 1200.

The vine requires a dry warm climate and deep stony soil – olive-growing areas are suitable – to produce fully mature fruits, and in such regions the grape can be used both for wine and dessert purposes. In cooler climates, where it does not develop its full sweetness, it is used for jam and eau-de-vie where a little acidity does not matter.

PLATE 143 labelled *Raisins blancs* var.



Raisins blancs. var.

The fig grows wild throughout Syria, eastern Iran and Afghanistan, and is naturalized in much of the Mediterranean. It has been cultivated for its fruit since ancient times. The Greeks, Romans and Egyptians all grew figs long before the birth of Christ, and it is thought that by the end of the fourteenth century it was distributed throughout both China and India. Although the fig may well have been introduced into Britain by the Romans, it was subsequently reintroduced in 1525, when Cardinal Pole planted several trees, brought from Italy, in the garden of Lambeth Palace.

Today the fig is cultivated commercially in Spain, Italy and Turkey, and it is also grown by amateurs throughout the warmer parts of the USA and Europe. There are several hundred cultivars available, varying widely in the colour, flavour, and season of ripening of the fruit, but in Britain the most popular for general use are probably 'Brown Turkey', 'Brunswick', and 'White Marseilles'. In milder areas a good crop of fruit can be obtained if the tree is grown on well-drained soil and given the protection of a south-facing wall, although a very cold winter can cut the tree right back to its roots.



Ficus violette.

Ficus violacea

P. J. Redouté

Beerin

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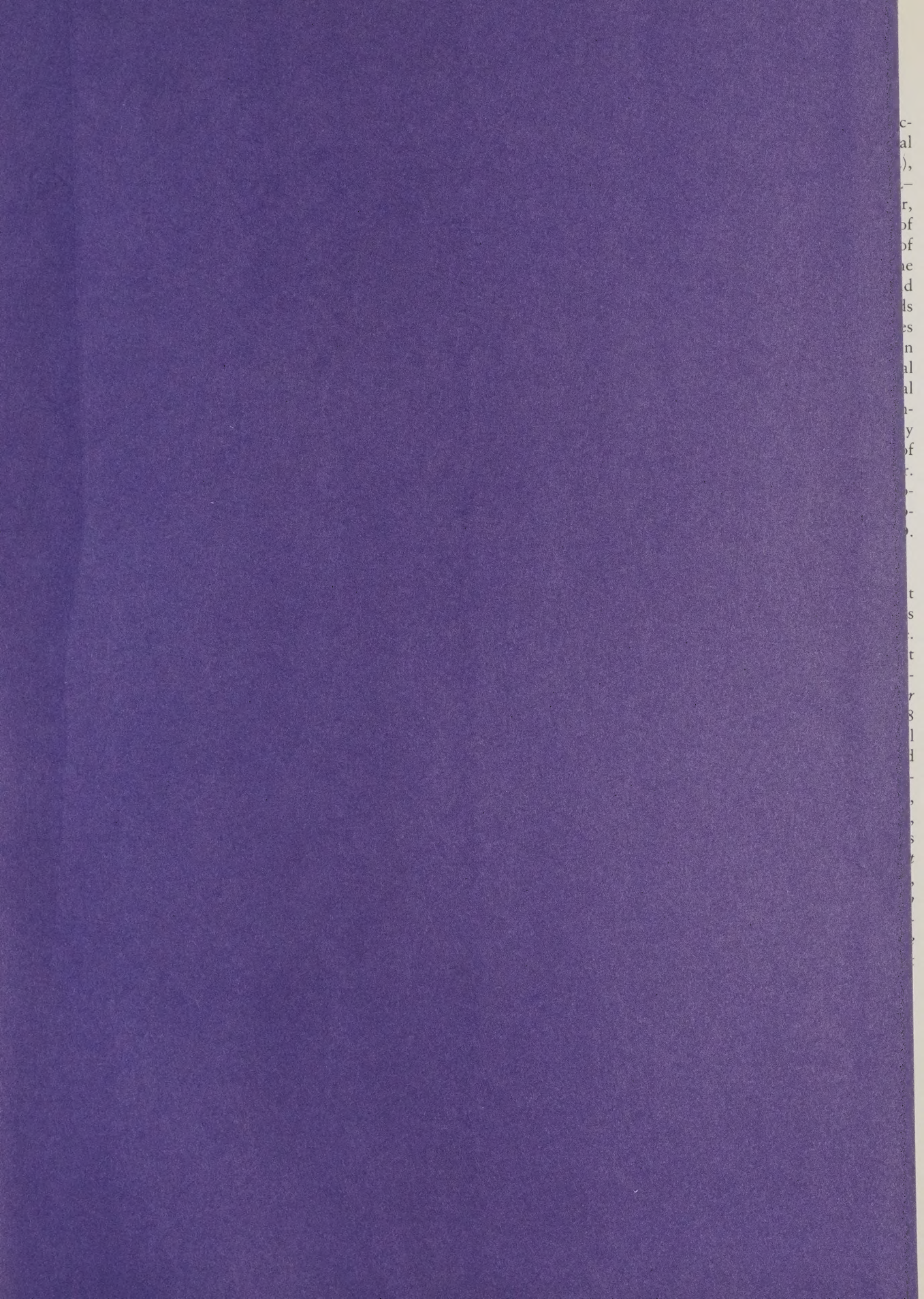
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