

"Prince," and conducted himself with such conspicuous valour at the battle of Solebay (Southwold Bay) in May 1672 that he won special approbation, and shortly afterwards was made rear-admiral and knighted. In 1675 he was sent to suppress the Tripoline piracies, and by the bold expedient of despatching gun-boats into the harbour of Tripoli at midnight and burning the ships he induced the dey to agree to a treaty. Shortly after his return he undertook a similar expedition against the Algerines. In 1680 he was appointed commissioner of the navy, an office he held till his death in 1688. He was buried at Knowlton church, Kent, where a monument has been erected to his memory.

See Charnock, *Biog. Nav.* i.; Hist. MSS. Comm. 12th Rept.

**NARCISSUS**, in Greek mythology, son of the river god Cephissus and the nymph Leiriope, distinguished for his beauty. The seer Teiresias told his mother that he would have a long life, provided he never looked upon his own features. His rejection of the love of the nymph Echo (*q.v.*) drew upon him the vengeance of the gods. Having fallen in love with his own reflection in the waters of a spring, he pined away (or killed himself) and the flower that bears his name sprang up on the spot where he died. According to Pausanias, Narcissus, to console himself for the death of a favourite twin-sister, his exact counterpart, sat gazing into the spring to recall her features by his own. Narcissus, representing the early spring-flower, which for a brief space beholds itself mirrored in the water and then fades, is one of the many youths whose premature death is recorded in Greek mythology (*cf.* Adonis, Linus, Hyacinthus); the flower itself was regarded as a symbol of such death. It was the last flower gathered by Persephone before she was carried off by Hades, and was sacred to Demeter and Core (the cult name of Persephone), the great goddesses of the underworld. From its associations Wieseler takes Narcissus himself to be a spirit of the underworld, of death and rest. It is possible that the story may have originated in the superstition (alluded to by Artemidorus, *Oneirocritica*, ii. 7) that it was an omen of death to dream of seeing one's reflection in water.

See Ovid, *Metam.* iii. 341-510; Pausanias ix. 31; Conon, *Narrationes*, 24; F. Wieseler, *Narkissos* (1856); Greve in Roscher's *Lexikon der Mythologie*; J. G. Frazer, *The Golden Bough* (1900), i. 293.

**NARCISSUS**, a genus of bulbous plants belonging to the family Amaryllidaceae, natives of central Europe and the Mediterranean region; one species *N. Tazetta*, extends through Asia to Japan. From these, or rather from some of these, by cultivation and hybridization, have arisen the very numerous modern varieties. The plants have long narrow leaves springing from the bulb and a central scape bearing one or more generally large, white or yellow, drooping or inclined flowers, which are enveloped before opening in a membranous spathe. The flowers are regular, with a perianth springing from above the ovary, tubular below, with spreading segments and a central corona; the six stamens are inserted within the tube. The most interesting feature botanically is the "corona" or "cup," which springs from the



FIG. 1.—Flowers of *Narcissus* base of the flower-segments. (*Narcissus Tazetta*) bursting from This gives the special character to the flower, and the

members of the genus are classified according to the length of this organ as compared with that of the segments. The most probable supposition is that the cup is simply an excrescence or "enation" from the mouth of the flower-tube, and is connected with the fertilization of the flowers by insect agency.

There are five well-marked sections.

1. The hoop-petticoat narcissi, sometimes separated as the genus *Corbularia*, are not more than from 3 to 6 in. in height, and have grassy foliage and yellow or white flowers. These have the coronet in the centre of the flower very large in proportion to the other parts, and much expanded, like the old hooped petticoats. They are now all regarded as varieties or forms of the common hoop-petticoat, *N. Bulbocodium*, which has comparatively large bright yellow flowers; *N. tenuifolius* is smaller and somewhat paler and with slender erect leaves; *N. citrinus* is pale lemon yellow and larger; while *N. monophyllus* is white. The small bulbs should be taken up in summer and replanted in autumn and early winter, according to the state of the season. They bloom about March or April in the open air. The soil should be free and open, so that water may pass off readily.

2. A second group is that of the Pseudonarcissi, constituting the genus *Ajax* of some botanists, of which the daffodil, *N. Pseudonarcissus* is the type. The daffodil (*fig. 2*) is common in woods and

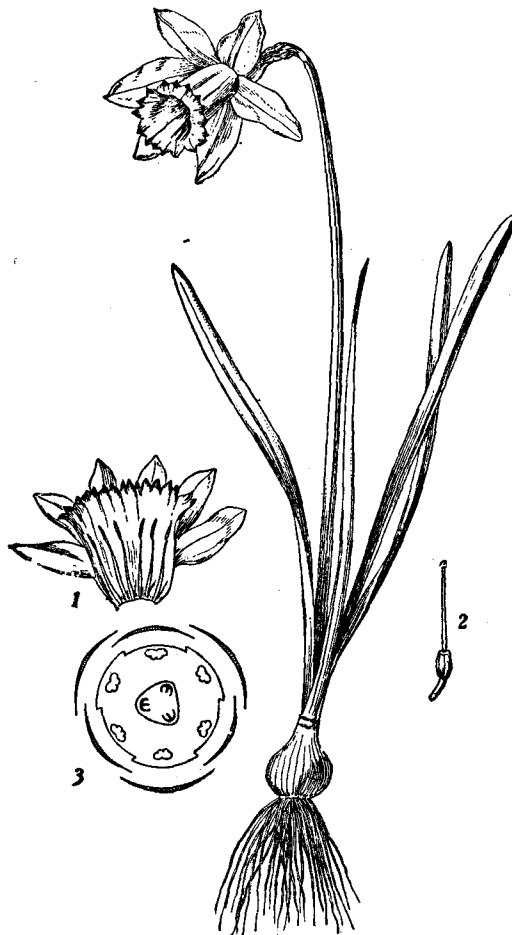


FIG. 2.—Daffodil—(*Narcissus Pseudonarcissus*).

1, Flower cut open; 2, pistil; 3, horizontal plan of flower.

thickets in most parts of the north of Europe, but is rare in Scotland. Its leaves are five or six in number, are about 1 ft. in length and 1 in. in breadth, and have a blunt keel and flat edges. The stem is about 18 in. long and the spathe single-flowered. The flowers are large, yellow, scented and a little drooping, with a corolla deeply cleft into six lobes and a bell-shaped corona which is crisped at the margin; they appear in March or April. In this species the corona is also very large and prominent, but is more elongated and trumpet-shaped, while the other members are regarded as subspecies or varieties of this. Of this group the most striking one perhaps is *N. bicolor*, which has the perianth almost white and the corona deep yellow; it yields a number of varieties, some of the best known being Empress, Horsfieldi, Grandee, Ellen Willmott, Victoria, Weardale Perfection, &c. *N. moschatum*, a native of the Pyrenees and the Spanish peninsula, is a cream-coloured subspecies of great beauty with several forms. *N. cyclamineus* is a pretty dwarf subspecies, native of Portugal, with narrow linear leaves and drooping flowers with reflexed lemon-yellow segments and an orange-yellow corona. *N. major* is a robust form with leaves  $\frac{1}{2}$ - $\frac{3}{4}$  in. broad and bright lemon-yellow flowers 2-2 $\frac{1}{2}$  in. long; *maximus* is a closely-related but still finer form; *obvallaris* (the Tenby daffodil) is an early form with

uniformly yellow flowers. *N. minor* and *minimus* are miniature repetitions of the daffodil. All these grow well in good garden soil, and blossom from March onwards, coming in very early in genial seasons.

3. Another group, the mock narcissi or star daffodils, with coronets of medium size, includes the fine and numerous varieties of *N. incomparabilis*, one of which, with large, double flowers, is known as butter-and-eggs; *N. odoratus*, known as the campernelle jonquil, has two to four uniform bright yellow flowers, and is considered a hybrid between *N. Jonquilla* and *N. Pseudonarcissus*. A form with sweet-scented double flowers is known as Queen Ann's jonquil; *N. juncifolius*, a graceful little plant from Spain, Portugal and south France, has one to four small bright yellow flowers on each scape. The hardier forms of this set thrive in the open border, but the smaller sorts, like Queen Ann's jonquil, are better taken up in autumn and replanted in February; they bloom freely about April or May. *N. triandrus*—Ganymede's Cup—is a pretty little species with white flowers about 1 in. long; in several of its varieties the flowers are a pale or deeper yellow; they make attractive pot plants.

4. The polyanthus or bunch narcissi form another well-marked group, whose peculiarity of producing many flowers on the stem is indicated by the name. In these the corona is small and shallow as compared with the perianth. Some of the hardier forms, as *N. Tazetta* itself, the type of the group, succeed in the open borders in light well-drained soil, but the bulbs should be deeply planted, not less than 6 or 8 in. below the surface, to escape risk of injury from frost. Many varieties of this form of narcissus, such as Grand Monarque, Paper white, Soleil d'or, are grown. They admit of being forced into early bloom, like the hyacinth and tulip. They vary with a white, creamy or yellow perianth, and a yellow, lemon, primrose or white cup or coronet; and, being richly fragrant, they are general favourites amongst spring flowers. Many tons of these flowers are exported from the Scilly Isles to the London markets in spring. The "Chinese sacred lily" or "joss flower" is a form of *N. Tazetta*. The jonquil, *N. Jonquilla*, with yellow flowers, a native of south Europe and Algeria, of which there are single and double flowered varieties, is also grown in pots for early flowering, but does well outside in a warm border.

5. There remains another little group, the poet's or pheasant's-eye narcissi (*N. poeticus*), in which the perianth is large, spreading and conspicuous, and the corona very small and shallow. These pheasant's-eye narcissi, of which there are several well-marked varieties, as *radiiflorus*, *poetarum*, *recurvus*, &c., blossom in succession during April and May, and all do well in the open borders as permanent hardy bulbs. *N. biflorus*, the primrose peerless, a two-flowered whitish yellow-cupped species, equally hardy and easy of culture, is a natural hybrid between *N. poeticus* and *Tazetta*. *N. gracilis*, a yellow-flowered species, has also been regarded as a hybrid between *N. Tazetta* and *N. juncifolius*, and blooms later.

Of late years some remarkably fine hybrids have been raised between the various distinct groups of narcissi, and the prices asked for the bulbs in many cases are exceedingly high. One of the most distinct groups is that known under the name of "Poetaz"—a combination of *poeticus* and *Tazetta*. The best forms of *poeticus ornatus* have been crossed with the bunch-flowered *Tazettas*, and have resulted in producing varieties with large trusses of exquisite flowers more or less resembling the ornatus parents, and varying in colour from the purest white to yellow, the rim of the corona being in most cases conspicuously and charmingly coloured with red or crimson. This is an excellent group for cutting purposes, but it will take a few more years to make the varieties common.

For an account of the history and culture of the narcissus see F. W. Burbidge, *The Narcissus* (1875); a more recent scientific treatment of the genus will be found in J. G. Baker's *Handbook of Amarillideae* (1888); see also Nicholson, *Dictionary of Gardening* (1886); and J. Weathers, *Practical Guide to Garden Plants* (1901).

**NARCOTICS** (Gr. *ναρκωτικός*, making numb), a general term for substances having the physiological action, in a healthy animal, of producing lethargy or stupor, which may pass into a state of profound coma or unconsciousness along with complete paralysis, terminating in death. Certain substances of this class are used in medicine for the relief of pain, and are then called anodynes, whilst another group produce profound sleep, and are consequently known as hypnotics. In one sense, anaesthetics, such as chloroform and ether, may be held to be narcotics, but, as they are usually volatile substances causing unconsciousness for a comparatively short time, they are conveniently separated from the true narcotics, the effects of which are much more lasting. These distinctions are to a great extent artificial, as it is evident that a substance capable of producing partial insensibility to pain, or sleep, will inevitably in larger doses cause profound coma ending in death. Hence we find the same substances sometimes classed as anodynes and at other times as hypnotics. For example, small doses of opium, or of one or

other of its preparations, relieve pain, whilst larger doses act as hypnotics, causing deep sleep passing into coma. Cannabis Indica, belladonna and hyoscyamus, are also anodyne in their action. The chief narcotics are mentioned below.

*Opium* is the inspissated juice of the *Papaver somniferum*, containing 7.5 to 10.5% of anhydrous morphine. Besides morphine some of the other alkaloids contained in it are of a narcotic nature, notably papaverine, narceine, meconine, cryptopine and narcotine, but the principal anodyne and narcotic effects are due to the morphine alkaloid. Though seasoned opium takers may take 20 to 30 grs. without noticeable effects, 1 to 3 grs. produces marked symptoms in the western races. Idiosyncrasy is marked in regard to the amount of opium a person can safely take. The medicinal dose is up to 2 grs., and the smallest dose that has been known to cause death in an adult is  $\frac{1}{2}$  gr. The narcotic properties of *Morphine* vary as to whether it is taken by the stomach or injected under the skin; 2 grs. by the stomach is dangerous, and a safe medicinal dose by the skin is  $\frac{1}{8}$  to  $\frac{1}{4}$  gr. The smallest dose that has produced death in an adult was  $\frac{1}{4}$  gr. given hypodermically. The motor centres of the brain and spinal cord are first stimulated by opium and morphine and later depressed; death in fatal cases being from paralysis of the respiratory centre of the medulla. For the treatment of poisoning see under OPIUM.

*Cannabis indica* or Indian Hemp (see HEMP).—The part used in medicine is the non-fertilized female spikes of the *Cannabis sativa*. The active constituent is the resin containing cannabinin with the active principle cannabinol, the alkaloids cannabinene and tetanocannabinine. *Cannabis indica* is sold in the East under various names. A confection of the drug made in Arabia is called hashish. Churrus is the resin scraped off the leaves, and the dried leaf is called bang, gunga or ganga being the name given to the dried flowering tops sold for smoking. The medicinal dose is  $\frac{1}{4}$  to 1 gr. of the extract, 2 to 3 grs. is a poisonous dose, but there is no recorded fatal case in man. In Eastern countries the smoking of *Cannabis indica* produces a form of mania. The effects of smaller doses are intoxication of a pleasant character, exaltation, hallucinations and delirium, later dilatation of the pupils, drowsiness, sleep and coma. Indian hemp is an uncertain anodyne and hypnotic. When large quantities have been taken an emetic should be given or the stomach pump used, and endeavour to allay excitement until the effects have passed off.

*Belladonna* and *Atropine*.—The leaves of the *Atropa Belladonna* or deadly nightshade of which the active principle is atropine principally used as a sulphate. A small dose of belladonna or atropine causes dryness of the throat and mouth, dilatation of the pupils, dimness of vision except for distant objects and often double vision. The pulse becomes quick, rising, in an adult, from 80 to 120 or 160 beats per minute; and there is often a bright red flush over the skin. The intellectual powers are at first acute and strong, but they soon become confused. There is giddiness, confusion of thought, excitement, a peculiar talkative wakeful restiveness, in which the person shows that his mind is occupied by a train of fancies or is haunted by visions and spectres. Often there is violent delirium before sleep comes on. The sleep after a large dose deepens into stupor, with great muscular prostration or paralysis. During all the time the pupils are widely dilated. Death occurs from failure both of the heart's action and of respiration. The minimum lethal dose is not known, but 80 grs. of the root have caused death;  $\frac{1}{10}$  to  $\frac{1}{8}$  gr. hypodermically have caused dangerous symptoms and  $\frac{1}{2}$  gr. would almost certainly be fatal. For the medicinal preparations and treatment of poisoning see BELLADONNA.

*Stramonium*.—The part of the plant used is the leaves and seed of the *Datura Stramonium* or thorn apple, the alkaloidal constituent being daturine, a variable mixture of hyoscyne and atropine. The physiological action is almost identical with belladonna. Poisoning is usually due to children eating the seeds; the lethal dose is unknown. The symptoms produced are divided into three stages—delirium, sleep and deep coma. In case of slight poisoning a rash is one of the toxic symptoms. The treatment of poisoning is to give emetics, wash out the stomach and give stimulants and pilocarpine subcutaneously, also to apply warmth and to use artificial respiration if necessary.

*Hyoscyamus*, the leaves of the *Hyoscyamus niger* or henbane (*q.v.*). The active principle is hyoscyamine. The physiological action is almost similar to belladonna, with excitement and cardiac stimulation and afterwards depression and stupor, but the action of hyoscyamus on the heart is more powerful. In large doses it is a strong cerebral depressant, and produces dilatation of the pupil;  $\frac{1}{10}$  gr. of hyoscyamine produces marked effects, sleepiness and dryness of the mouth;  $\frac{1}{2}$  gr. by subcutaneous injection has produced fatal results. The treatment of hyoscyamus poisoning is similar to that of stramonium.

*Hops* (the *Humulus Lupulus*), containing the active principle lupuline, and *Lactucarium*, the juice of the *Lactuca virosa* (lettuce), containing an alkaloid lactucine, are very feeble narcotics, causing heaviness and sleep if taken in large doses.

*Chloral Hydrate* is a pure hypnotic which in larger doses is a powerful narcotic, producing prolonged sleep with depression of the cardiac and motor centres. It is an intrinsic cardiac poison, the