The genus *Gethyllis* is one of the most extraordinary and poorly researched of all southern African Amaryllids. It consists of thirty-seven currently accepted species and subspecies (Müller-Dobles 1986). Members of the genus are widely distributed throughout the temperate south-western and southern Cape Province and semi-desert regions of Namqualand and southern Namibia. A closely allied and primarily summer-growing genus *Apopodium* occurs from the southern Cape to the Transvaal. *Apopodium* is distinguished from *Gethyllis* through differences in the shape of its flower, i.e. the manner in which the stamens adjoin the perianth tube. *Gethyllis* species undergo three distinct phases during their annual growth cycle: a winter leafing phase, the reproductive summer flowering and autumn/winter fruiting phases. Foliage is typically helicoid (spiral), although broad-leaved forms are not uncommon. Species of *Gethyllis* produce fragrant, short-lived white, pink or mauve flowers of heavy substance. For plants producing short-lived, solitary flowers it is critical that they flower simultaneously to ensure effective fertilization. Du Plessis & Duncan (1985) suggest that it is unlikely that the inherent biological clocks of separate plants can be so closely synchronized that they will cause them to flower within a day or two of each other during their annual cycle. However, it is likely that some external stimulus triggers the flowering mechanism in individuals already possessing immature internal flowers. Passing cold fronts, accompanied by a definite drop in atmospheric pressure, irrespective of whether there are showers or not, have a definite effect on the flowering of *Gethyllis*.

After fertilization the subterranean ovary gradually enlarges and a cylindrical or club-shaped berry emerges during late autumn. In the case of *G. ciliaris* (Fig. 1) fruiting commences approximately three months after flowering (Fig. 2). The shape, colour and aroma of the fruits vary considerably. Slender cylindrical or more inflated fruits may in extreme cases reach 14 cm in length and vary in colour from beige and yellow to red. Their odour and taste is often difficult to define, but in *G. afra*, for example, the slender burgundy cylinder smells like ripe strawberries, while the delicious spotted fruit of *G. brittaniana* (see illustration on p. 101) could best be described as being not unlike the acidic taste of custard apple. It is noteworthy that the seeds of species such as *G. afra* and *G. multfolia* (Fig. 3) are contained within a single tube of amorphous pulp, whereas in *G. brittaniana* three distinct, longitudinal, seed-bearing segments are enclosed within the protective skin. Attracted by the ripening fruits, tortoises play an important role in dispersal of the
rather large, often stippled, spherical or oblong seeds. With the oncoming rains, germination rapidly takes place, giving rise to a unifoliate bulblet which, as it develops, draws nutrients from the shrivelling seed (Fig. 4). Gethyllids thrive in a variety of well-drained, deep sand or more stony habitats on lowland flats or in higher altitude montane environments. However, the recently discovered species, *G. kaempensis* inhabits peaty marshes on the Cape Peninsula and is seldom seen due to flowering only after veld fires. It's slender glass-like leaves are barely indistinguishable from those of its restioloid co-inhabitants. The fleshy, often contractile roots of gethyllids may be extremely long and in species such as *G. ciliaris*, are attached to enlarged, almost rhizomatous basal plates (Fig. 4).
has been suggested that this adaptation serves as a defence against mole-rat predation, as fresh bulblets regenerate on the unaten remains of these basal plates (Du Plessis & Duncan 1989). Aided by the contractile roots, the often extremely old bulbs of Gethyllis are drawn deeper into the soil. The bulb and foliage are therefore

connected through a long tube-like sheath or cataphyll. It is probable that, because of their long-necked bulb structure, the Swedish taxonomist, Linnæus formulated the name Gethyllis from the Greek word gethullis (Latinized as gethylis), which is a diminutive of gethysnon, a leek. The often highly ornamented cataphylls serve to keep the sensitive leaf bases of the plant from disarray and scorching in the hot sand. It is likely that the pubescence or radiating fimbriations (hair-fringed structures) present on these structures in some species serve to trap moisture or prevent excessive transpiration.

The virtues of kukumakranaka or bramakanka, as they were known to the Hottentot people ofNamaqualand, have long since been extolled. Early settlers to the Cape greatly valued these highly aromatic fruits and placed them in rooms to perfume the air, consumed them as sweetmeats or infused their essence in liquor. Kukumakranaka Brandy, as it is more specifically known, was, and still is, used as a remedy for stomach cramps and colic.

Allen vegetation spread, the agricultural use of land and 'development' are contributing factors which have led to the demise of geophyte-rich lowland habitats and their once widely-known plant inhabitants such the kuku-
makranaka. Problems associated with researching members of the genus Gethyllis are often logistical, insofar as it is difficult to relocate isolated populations at times of year when leaves have withered and flowering itself may only take place very fleetingly. For flowering to be induced, certain species require very specific environmental growing conditions and are not at all suited to cultivation. As much variability exists between geographically isolated populations of Gethyllis and it is often not possible to truly verify the identity of species, it is feasible to assume that 'cryptic species' do exist and await identification.

Answers to taxonomic questions relating to the species and species complexes rest in the isolation and examination of genetic material of Gethyllis.

References