And as the old bull elephants teach the young bulls, the latter had taught them the things of the forest. About the trees. The difference between a kalander — the Outeniqua yellowwood — and an upright, the real yellowwood. He taught them to know a white pipe, the white, red and yellow, red alder, assegai and hard pear, ironwood, candlewood, kassie. Some you know by the bark others by the leaf. At the beginning a sicking wood and a saffron looked alike until you learn to look for the two hard buds near the stem of the sicking wood's leaf. They came to know the shrubs of the underbush, which were medicine and which were not. Which berries you could eat and which not.

From Circles in a Forest
Daleme Matthee

History
Since the earliest history indigenous forests have played a very important role in the development of the country. The early settlers were largely dependent on wood from forests for their normal timber requirements. When the Dutch East India Company founded the first settlement in the Cape in 1652, wood from the surrounding forests was used extensively for making furniture, tools and other household articles; for erecting protective fences and for building boats and quays. These forests were severely damaged and consequently settlers had to go eastwards to the forests near Swellendam, George, Knysna and the Tsitsikamma.

This has always been a common pattern where new land was colonised. There existed such an urgent need for timber that it was almost impossible to control exploitation of the forests. Although forest supervisors were appointed in the Cape, they did not have full control over the forests, due to slow transport over the long areas, as well as a shortage of staff.

An important milestone in the history of forestry was reached in 1850 with the appointment of the first trained forest officer, Count de Vasselot de Regne, as Superintendent of Forests. To prevent over-exploitation of the forests and to protect them, he laid the foundation for systematic, scientific forestry in South Africa. The first Forest Act of 1888 and the Forest Act of 1914 were also important milestones.

The then Department of Forestry gained full control over indigenous forests such as those of Knysna, Tsitsikamma and the Eastern Cape for the first time. Woodcutting was restricted since 1913 by compulsory registration and in 1939 the woodcutter system was finally abolished to prevent over-exploitation of the destruction of the forests.

Conservation and recovery
In the meantime various exotic tree species from countries with a similar climate to that of South Africa were introduced. In 1883 a plantation of pine, blackwood, wattles and eucalyptus was established at Concordia near Knysna, but mainly failed due to competition with indigenous trees. The failure of the plantations was worsened in the years 1910 and 1920. During this time well-known plantations like Jonkershoek and Goudveld, which are mentioned in Circles in a Forest, as well as Wilfontein, Bergplaas and the Farm Arend, failed. These forests replenished indigenous forests and protected them from over-exploitation, thus saving them from being reduced to scrub forest. From 1939 to 1985 the forests were left alone except for the removal of weeds and dead trees. Research in the forests continued and provided the information on which the present management system of multiple use could be based. The first proper management plan according to this system was put into practice at Diepwalle in 1970. Such a plan is based on the scientific management of forests in order to ensure optimum utilisation in accordance with the concept of “multiple land use”. This means that due account is taken of the natural relationship and interaction between all the organisms in a forest, its growth, its recreational potential, the economic utilisation of, for instance, dead trees and preserving the natural beauty of the forest.

Fauna
The indigenous fauna, much of which still survives, forms an integral part of the forests. Unfortunately the animals are not easily seen. Larger mammal species of the veld include the bushbuck “with its brown body and speckled neck”, as described by Daleme Matthee in Circles in a Forest, leopard, caracal, baboon, vervet monkey and, described by Daleme Matthee as the most beautiful of them all, “the blue buck from the dense underbush. So tiny no nimble of foot that you seldom find them. Although, perhaps where one of them had crossed the driftsand near a stream or a road or the Amor fungi and was detected by the herd animals live in groups of six to 20. They are omnivorous, eating bulbs, fruit, grass and insects. Bushbuck hide in the forest during the day, while they graze in areas with more foliage and species as well as for food. Baboons are plentiful, but prefer to stay in rocky areas rather than in the forest. Leopards are also quite common. They are shy animals and often prefer to stay in the mountain areas rather than in the forest.

The forests of the Southern Cape have a smaller bird population compared to that of the Transvaal. There are only 85 species of birds, 40 species of the so-called typical forest birds are found here. More species can be found in the areas adjacent to the forest, such as the scrub forest or fynbos next to rivers, swamps and near the sea. The rare crowned eagle can sometimes be seen here. Its strong wings enable it to fly almost vertically up into the air through openings in the roof of the forest. Its prey includes vervet monkeys, small birds such as the scrub and the lark.

The African seagull is the forest bird's biggest enemy. There are numerous rams, sheep and they can easily be distinguished from other forest birds in the forest. The Knysna lighthouse and the forest lighthouse are also quite common. The forest lighthouse (na-rina trogon) is the only kind of its family in South Africa. It is described by Daleme Matthee as being as beautiful as the Knysna lighthouse, but “more stupid”. The members of the thrush family are the best songsters in the forest. They are the olive thrush, choriopet, Cape robin and starred robin. Because of poor visibility in the forest the great birds in the forest tend to have rather loud penetrating calls. Sound takes over as a means of communication as well as to advertise and protect territory.

Flora
A part of the Outeniqua hiking trail passes through the forests. Here and there, however, isolated patches of fynbos can be seen, which are locally known as “islands”. Patches of scrub forest and fynbos are often found at forest edges.

The composition of the indigenous forest varies from place to place, depending on height above sea-level, rainfall, type of soil, aspect of the hills and other factors. The forests are therefore divided into six forest types which vary from “dry” forest to “moist” and “wet” types of forest.

The “dry” type of forest is generally found on the steep northern and north-western slopes of the coastal belt. It reaches a maximum height of 15m and has a scrub-like appearance. Thorny bushes are common to this type. Species such as Carissa spinarosa.

The “moist” type of forest is found on the plains and hills and attains heights of 15m to 30m (hence also known as “high forest”). Valuable species such as stinkwood, yellowwood, white pear, candlewood, ironwood and many others occur here. The forest is very dense with vegetation and there is a great deal of witch-hazel (Tricholabrus crinitus).

The “wet” type of forest is found in the deep, perennially damp ravines. The height of this type of forest is usually about 15m and a dense undergrowth of ferns is common. The most important trees in this forest are red alder, white alder, Cape beech, stinkwood, tree fuchsia and Cape holly.

Management classes
In management plans certain areas of the forest are allocated to one of five management classes, viz. research, restoration, production, protection and recreation. The more accurate types of fynbos are considered to be heavily and selectively exploited in the past. These areas are allocated to the production and management class in an attempt to render them productive again through silvicultural treatment. Damaged areas of the forest that are exotics are cleared and artificially re-established by planting indigenous species.

Large areas, especially of the “dry” and “wet” types, are set aside as protected areas for indirect uses, such as water, soil, flora and fauna conservation and, last but not least, for their scenic value.

The recreation management class enables the public to share in the heritage, for instance, by providing the opportunity to stroll along hiking trails.

The policy, therefore, is one of conservational management for multiple use.

Topography, climate and geology
The topography of the area consists of a long range of terraces which stretch gradually from east to west, from the coastal uplands to the slopes of the Outeniqua Mountains. The altitude of the plateau starts at about 350m inland and reaches a height of 3000m - 600m. The Outeniqua Mountains behind it reach heights of approximately 1 200m. Rivers have cut deep mountain valleys through the plateau and flown towards the sea.

The area receives rain throughout the year, but the highest rainfall occurs from September to April and the rainfall varies from 700mm - 800mm annually at the coast to 1 000mm - 1 300mm in the mountains. There is a drop in temperature from the sea to the mountains. Temperatures vary from an average daily minimum of 7.4°C in July to 24.6°C, an average daily maximum in January. Dry, warm, strong winds often blow from the north. Between June and August snow can sometimes be seen on the mountains.

The geology is dominated by Table Mountain sandstones with associated sandstone and shale bands. Pre-Cape sediments (shales, schists and andesites) and granite are found on the low plateaus. The acidic loam soil of the plateaux and the sandy loam soil of the slopes were developed from the parent rock. The loam is a characteristic bottom layer of clay. The soil in the coastal region is sandy. The never-ending cycle of life and death has left a fertile layer of humus in forest and valley, which enables a wide variety of plants to grow on a layer of soil scarcely 300mm deep in places.

Issued by the Department of Environment as an aid to pupils studying the prescribed book “Circles in a Forest”. 