



Some of the Rhodes University second-year Botany students pressing their plants at Fort Fordyce. Photo by Nigel Barker.

Fort Fordyce: the Eastern Cape's **hidden gem**

BY:

**KAELEAH ANDREW, SARAH BRETT, RACHEL IBBETSON, PHOEBE INGERSOLL, RACHEL JARVIE, LAUREN OFFORD,
DEPARTMENT OF BOTANY, RHODES UNIVERSITY, GRAHAMSTOWN
AND NIGEL BARKER,**

CORRESPONDING AUTHOR, NIGEL.BARKER1962@GMAIL.COM, DEPARTMENT OF PLANT AND SOIL SCIENCES, UNIVERSITY OF PRETORIA

As part of plant taxonomy training, second-year Botany students at Rhodes University are sent on a weekend field trip to learn plant collection and identification. In 2015, the second-years visited Fort Fordyce Nature Reserve (NR) near the towns of Fort Beaufort and Adelaide in the Eastern Cape.

In addition to plant collecting, students were divided into groups to participate in various citizen science activities. They had to blog, manage a Facebook page, use iSpot, create a poster and pamphlet, and write a popular article. The students were allowed to use only their cell phone (mobile) cameras to take pictures of plants, and use the photos for their activities. This proved to be an interesting academic and pedagogic exercise, since it required the students to interact on scientific matters with people from extremely diverse levels of expertise using social media. Each group was required to diarise their thoughts, feelings and their progress for their chosen project.

As the academic leader of the exercise, I saw, assessed and guided the process over a period of several weeks. What follows is the final product from the 2015 group: a popular article on their collective experience.

A PLACE OF BEAUTY

You step out of your tent in the early morning. There is a slight chill in the air but the view is worth the goose-bumps. The valley in which the wet forest lies is shrouded in mist. The purple silhouettes of the mountains line the horizon. The sun's first rays hit the grassland to the west and the dew on the grass beneath your feet glints with the prospect of a glorious day in Fort Fordyce. The steep cliffs and kloofs which fall away to deep valleys are teeming with unique fauna and flora, ready to be discovered by an excited group of second-year Botany students from Rhodes University.

A RICH AND TRAGIC HISTORY

The beauty of this section of the Amatola escarpment is juxtaposed with its violent history. It is hard to imagine this place as 'Mount Misery', as it was called by the British soldiers stationed there in the 1850s. Named 'Mount Misery' because of the brutal battles fought during the second campaign of the 8th Frontier War, a war which had neither winners nor losers but consisted of a merciless game of cat-and-mouse between the Xhosa and Khoi and the British. The Xhosa, who knew the surrounding area far better than the British,



A carrion flower cousin, *Huernia thuretii*. Photo by Nigel Barker.

were able to take them by surprise on many occasions. Fort Fordyce was named after a British officer named Fordyce who lost his life on Mount Misery.

Fort Fordyce NR, managed by the Eastern Cape Parks and Tourism Agency, is situated on the Amatola escarpment. Some of the area's rich history is evidenced by the San people's rock paintings that are found in caves scattered across the area. The first inhabitants of this area, the San, lived off the land and hunted the wildlife until they were chased northward by influxes of white settlers and Bantu people. Due to the conflicts created by the differing cultures, the 1820 settlers from Britain were located here to ease the tension. There was still tension between these two groups, however, which led to the start of the Frontier War in the Eastern Cape. The name of this nature reserve originated during the Frontier War when a fort, called Fort Fordyce, was built in the area.

In 1835 most of the *boers* from this area joined the Great Trek northward, which resulted in the end of the Frontier War. The area has since become a farming area and is now well known for its citrus, biltong and venison production.

FORT FORDYCE BIODIVERSITY

The dominant vegetation types in the 2,146 ha Nature Reserve are Amatole Montane Grassland (Dohne Sourveld Grasslands), Southern Mistbelt Forest (Afri-montane Forest) and Eastern Cape Escarpment Thicket. The grasslands support grasses such as Blue Grass (*Andropogon appendiculatus*), Wire Grass (*Elionurus muticus*) and Rooigras (*Themeda triandra*), the latter being a very important grazing grass. The forests, which support valuable

timber species such as Ironwood (*Olea capensis*) and Real Yellowwood (*Podocarpus latifolius*), were heavily exploited in the past, leaving only a few large specimens today.

The mosaic of grassland-, forest-, valley-, and rocky cliff habitats supports a vast range of indigenous fauna and flora. The higher montane areas, constantly exposed to the sun, support predominantly grasslands, while the more shaded valleys, and slopes next to rivers and streams, support forests, ferns, and various shade-loving species.

SAMPLING NATURE

Plant collections are compiled for the purpose of creating plant records in a herbarium. These collections have enormous scientific value. They can provide physical material, such as DNA samples, for research purposes. Records of the time and place the plant was collected can also be used to create plant distribution maps and conservation plans (see also *Georeferencing history* on page 122 of this issue).

The primary purpose of the field trip was to learn how to collect and prepare plant specimens, and how to identify them correctly with the aid of the Selmar Schonland Herbarium facilities. Each student's collection was required to comprise 30 plant specimens from 20 different plant families.

Of the numerous plants collected there were five particularly striking indigenous plants which we felt were noteworthy. The most delicate looking of our selection is the Flower-of-an-hour (*Hibiscus trionum*). The leaves, fibrous roots and young stems of this widely distributed annual plant can be consumed raw or cooked, while the



The view from Fort Fordyce looking north across grassland and a forested valley towards the Winterberg. Photo by Nigel Barker.

ground shoots of *H. trionum* can be used in an infusion to dry and clean wounds as well as alleviate pain. It is also used as a laxative, stomachic or to treat skin problems such as rashes and warts.

Common Marsh Pokers (*Kniphofia linearifolia*) are very striking plants, with bright orange and yellow flowers standing tall on a long stem. The species flourishes in temperate habitats near water sources but, even when the rivers run dry, these hardy plants can generally survive through the winter months thanks to their thick, succulent roots. Red-hot Pokers are popular garden plants because of their vibrant orange flowers contrasting with their green leaves and stems. Their colours attract not only gardeners but also bees and sunbirds which pollinate them in return for sweet nectar.

The strangest looking of our selection is the succulent *Huernia thuretii*. A member of the family Apocynaceae, the species resembles the well-known Carrion Flowers – genus *Stapelia* – to which they are closely related.

The leguminous Fountain Bush (*Psoralea pinnata*) has historical significance since, according to PlantzAfrica, it "is one of the earliest South African plants to have been cultivated. In 1690 it was growing in England from seed collected in the Cape." This large shrub is distributed throughout most of South Africa. A good pioneer plant, it flourishes best near rivers and seeps. It has been used

in traditional medicine as an emetic and also for the relief of emotional or psychological stress.

The humblest of our favourite plants is the little yellow *Berkheya* daisy. No specific medicinal uses were recorded for this plant but some species of the genus have a chemical defence mechanism due to their ability to accumulate high concentrations of nickel, which in turn affords them a level of protection against herbivores. Plants such as this *Berkheya* are used commercially to purify soils of organic and inorganic contaminants – Mother Nature cleaning up after us!

Below: The magnificent Common Marsh Poker (*Kniphofia linearifolia*). This particular plant was found on the banks of a small stream.

Photo by Nigel Barker.



LEARNING BY DOING

In the end our trip reminded us that South Africa is home to a plethora of plant and animal species thanks to its diverse topography. These organisms are integral to many of our livelihoods, culture and rich history. The beauty of nature should not be confined to pixels in a photo but should rather be encountered first hand. Our plants need to continue living in our minds as opposed to just somewhere on Google. The field trip to Fort Fordyce was not simply an opportunity to collect plants but also an opportunity to experience nature in all its untouched glory. The knowledge you crave is just outside your door.

The richness of the entirety of Fort Fordyce's story, and its remoteness, is why it can now be called the Eastern Cape's hidden gem.

LITERATURE AND FURTHER READING

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