

HUNTING THE KING – *DROSERA REGIA* TRIP REPORT

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Drosera regia is one of the most iconic *Drosera* species, popular for its impressive stature and rarity. While most sundews are relatively small, *D. regia* clocks in with impressive 50 cm+ sharply pointed leaves that point skywards, making large specimens a sight to behold. It is also noted for its ability to capture copious volumes of insects and is the most basal *Drosera* species, the closest sundew relative to Venus flytraps (*Dionaea muscipula*) source. Despite its fame and reputation, little work has been done on the species in the wild. As it turns out, *D. regia* is one of the rarest South African sundews. In June 2022 I trekked out to check on these elusive giants and answer some burning questions about them.

While sometimes seen in nurseries, *Drosera regia* is exceptionally hard to find in South Africa's wilds. It is endemic to the Cape Fynbos, a floristic kingdom found only in Mediterranean regions of the country, famous for the insane diversity of plants, sundews included (Fig. 1). To add to this local limitation, the species is only found along Bain's Kloof Pass (also Bainskloof Pass), a mountainous pass between the towns of Wellington and Slanghoek built by road engineer Andrew Bain, which opened in 1853. No other localities are known, and for this reason it is listed as "rare" in the SANBI redlist. Site details are closely guarded. Currently, three locations are known: a lower location, the "upper waterfall" site, and another site higher in the mountains. The first two sites are both



Figure 1: My brother helping me scour the Fynbos for *Drosera regia*.

cultivated, the latter was discovered recently by a hobby botanist! *Drosera regia* habitat is typically described as peaty gravel soils with water running through them, and typically dominated by various plants in the family Restionaceae (one of the major fynbos groups) which makes the sundews quite hard to find, as both are tall plants with thin leaves! Most records I could find occur early in the year during summertime when the plant flowers. It would be hard to miss the large pink blooms erected above the surrounding vegetation. It is also known to go dormant, as seen in cultivation, but nobody knows exactly when. There is a gap in records after March in late Summer (after flowering) and before September, about springtime (emerging growth). Between this is a chasm of mystery as to what happens with the plant.

It doesn't help that the pass was mostly closed for over two years for roadwork and maintenance. I was due to join Alex Dietrick to see them October 2021, but it rained so much before the trip that the Tweede Tol campsite closed due to damage! I briefly visited the pass to see a new *D. rubrifolia* population in January 2022, but time was too tight to see *D. regia* as well.

To figure out what *D. regia* is up to there was no better way than to march into the mountains, camera in hand. It was a bright June day, and surprisingly warm for what is supposed to be winter. It took some river crossing and hiking along rocky Cape trails (they are rarely even or flat) to reach the lower site, a lovely wetland patch along a gentle slope. It was peaty and wet with many open patches, absolutely perfect for *Drosera*. Despite that, I could not find any! Even with a few sets of extra eyes and two different coordinates from reputable sources, not a single *regia* was found! I suspect the mountain nights were significantly cooler than the days, so the plants were likely dormant. A bummer after the hike, but no data is still data! I suspect they may go dormant soon after setting their seed, similar to winter growing sundews like *Drosera cistiflora*. I did not pursue the higher populations, as they were likely dormant too. They were seen at this site last year, so I am sure they are still around!

Another concern with this rare species is encroachment of invasive plants, or anthropogenic interference in the fire regime, something that fynbos as a biome (and many carnivorous plants) rely on for proper succession and function. Without fire, it is possible that surrounding vegetation could grow too densely and choke out the light-loving sundews (it is in the name!), a phenomenon I have seen occur on Table Mountain that has not seen burns in decades. Thankfully for our sticky buddies in Bainskloof, a natural fire ripped through its habitat in late 2017, clearing much of the overgrowth and allowing the plants to thrive. I could see this in the habitat, with many open patches allowing sundews to proliferate and grow readily. Thanks to hacking efforts I didn't see a single pine anywhere near the habitat, although they are still present in the general area.

Despite the disappointment in not finding *D. regia*, I did still find some truly wonderful sundews! *Drosera admirabilis* is a small rosetted species, also a Cape endemic, known for its beautiful round leaves and intense colours (Figs. 2 & 3). It was introduced to cultivation from Bainskloof, initially distributed as "species floating" as it is often observed almost submerged in shallow pans of water, or "floating"! It was described by Debbert in 1987, after being in cultivation for some time before that. If you see a sundew sold as "sp floating" or "admirabilis holotype" it is *Drosera admirabilis* from Bainskloof! It is exciting to see a species in its location of discovery, or to find the source of a legendary plant like seeing the patch of *D. capensis* that all Gifberg location plants originate from! These plants were in almost every wet, peaty patch that you could see along the seepage, often forming large clumps in exposed areas. I even saw some growing out of fissures in small rocks. Several plants were lying exposed on substrates, potentially washed out or having their habitat eroded by rain sometime before. They had substantial root systems, some up to 15 cm long. I can't say I have seen them growing semi-submerged anywhere but Bainskloof, usually on moss banks or small seepages on paths. It, like *D. capensis*, is one I only see in heavily waterlogged substrates.



Figure 2: Hendré with some *Drosera admirabilis* in situ.



Figure 3: Typical habitat of *Drosera admirabilis* in Bainskloof.

While I did not find the king of sundews, this trip was both gorgeous in views and valuable for the information on dormancy and habitat of the species. It will take many repeat visits and possibly camera monitoring to really understand the niche and habits of *D. regia*. Nothing good ever comes easy as they say. Regardless, it is comforting to know that the species habitat is still secure and that I have an excuse to hike this amazing area many more times in future! Looking forward to finally seeing the elusive behemoth in the wild. I hope to return in September to look for new locations of a novel species in the *D. cistiflora* complex, I will make some pitstops to the king and see if they have woken up by then. So much discovery to do!