= Drosera regia =

Drosera regia , commonly known as the king sundew , is a carnivorous plant in the sundew genus Drosera that is endemic to a single valley in South Africa . The genus name Drosera comes from the Greek word droseros , meaning " dew @-@ covered " . The specific epithet regia is derived from the Latin for " royal " , a reference to the " striking appearance " of the species . Individual leaves can reach 70 cm (28 in) in length . It has many unusual relict characteristics not found in most other Drosera species , including woody rhizomes , operculate pollen , and the lack of circinate vernation in scape growth . All of these factors , combined with molecular data from phylogenetic analysis , contribute to the evidence that D. regia possesses some of the most ancient characteristics within the genus . Some of these are shared with the related Venus flytrap (Dionaea muscipula) , which suggests a close evolutionary relationship .

The tentacle @-@ covered leaves can capture large prey , such as beetles , moths , and butterflies . The tentacles of all Drosera species are specialised stalked glands on the leaf 's upper surface that produce a sticky mucilage . The leaves are considered active flypaper traps that respond to captured prey by bending to surround it . In its native fynbos habitat , the plants compete for space with native marsh grasses and low evergreen shrubs . Of the two known populations of D. regia , the higher altitude site appears to be overgrown and is essentially extirpated . The lower altitude site is estimated to have about 50 mature plants , making it the most endangered Drosera species , since it is threatened with extinction in the wild . It is often cultivated by carnivorous plant enthusiasts , and a single cultivar has been registered .

= = Description = =

Drosera regia plants are fairly large herbs that produce horizontal woody rhizomes and a crown of large , linear leaves up to 70 cm (28 in) long and 2 cm (0 @.@ 8 in) wide . The leaves possess stalked glands (tentacles) on the upper surface of the lamina along nearly the entire length of the leaf . The leaves lack petioles and stipules , emerging by circinate vernation (uncurling) and tapering to a filiform point . The tentacles and the leaf itself are capable of responding to prey by bending toward insects trapped in the sticky mucilage produced by the glands . Leaves are even capable of folding over themselves several times . Each leaf can possess thousands of tentacles , which can aid in the retention of larger prey when combined with the leaf wrapping tightly around captured insects . In its native habitat , D. regia has been known to capture large beetles , moths and butterflies . Plants go dormant during the colder season and form a dormant bud , consisting of a tight cluster of short , immature leaves . Plants begin to break dormancy in mid @-@ July with a typical growing season lasting from October to April , though this is variable and plants can continue growing year @-@ round without dormancy . Individual leaves die back but remain attached to the short stem , clothing the bottom portion of the plant in the blackened dead leaves of former years .

The woody rhizomes produced by the plant are one of the unusual characteristics that it shares only with D. arcturi in the genus ; the absence of woody rhizomes in all other Drosera is often cited as an indication of the presumed ancient lineage of D. regia and D. arcturi . Drosera regia also produces relatively few thick , fleshy roots , which possess root hairs along the terminal 15 cm (6 in) . Asexual reproduction of mature plants usually occurs after flowering with new plants arising from the rhizome and roots . After a fire , undamaged roots will often re @-@ sprout new plants .

Drosera regia flowers in January and February , producing scapes up to 40 cm (16 in) long . The scapes emerge vertically , lacking the circinate vernation of its leaves and all other scapes of the genus Drosera , with the exception of D. arcturi . The scapes consist of two primary branches and bear 5 to 20 (sometimes 30) unscented pink flowers with 2 ? 3 cm (0 @.@ 8 ? 1 @.@ 2 in) long petals . Bracts are small , bearing some reduced tentacles . Each flower has three unbranched , spreading styles emerging from the top of the ovary and extending beyond the five erect stamens (15 mm long) , which surround the ovary . This arrangement minimizes the chance of self @-@ fertilisation . Studies have shown that the operculate pollen shed in tetrads (fused groups of four pollen grains) , characteristics that are similar in the related Dionaea muscipula (the Venus flytrap)

and Aldrovanda vesiculosa , is incompatible with clones , failing to produce seed when plants are self @-@ fertilised . Seeds are brown to black , linear and ornamented with fine network @-@ like markings , and 2 mm long and 0 @.@ 5 mm in diameter . Seed is shed by the end of March .

The unusual characteristics that set it apart from other species in the genus include the woody rhizome , undivided styles , and the operculate pollen . Drosera regia shares other features with the robust Tasmanian form of D. arcturi , including the lack of stipules and petioles and the non @-@ circinate growth of the scape .