

## FRESHWATER ECOSYSTEM PLANTING - SPECIES LIST

### CYPERACEAE (SEDGES)

**Helophyte:** a plant typical of marshy or lake-edge environments, in which the perennating organ lies in soil or mud below the water level, but the aerial shoots protrude above the water.

**Hydrophyte:** a plant that is morphologically and/or physiologically adapted to grow in water or very wet environments.

**Hyperhydrate:** an emergent plant, with leaves and/or stems emerging well beyond the water surface, roots penetrating the substrate.

**Mesophyte:** a plant with only moderate water requirements

Sedges in **bold** are common or locally common in the greater Durban area

<b><i>Cyperus articulatus</i></b>	0.6-1.6 m	Emergent helophyte. Wet, organically rich sediments at edges of pans, in sand and alluvium along river banks, or coastal swamps	Permanent/seasonal zone
<b><i>Cyperus denudatus var. denudatus</i></b>	0.2-0.9 m	Emergent helophyte. Permanent water of swamps and streambanks, less frequently in wet depressions in grassland	Permanent/seasonal
<b><i>Cyperus dives</i></b>	Up to 1.82 m	Helophyte. Reed swamps, moist depressions, riverbanks and streamlet margins	Seasonal zone
<b><i>Cyperus fastigiatus</i></b>	0.6-2.59 m	Helophyte. In vleis in permanent water, or towards the margins where periodically inundated	Permanent zone
<b><i>Cyperus involucratus</i></b>	Up to 1.75 m	Helophyte. Wetlands, river margins, sometimes considered a northern form of <i>C. textilis</i>	Permanent/seasonal zone
<b><i>Cyperus laevigatus</i></b>	0.15-0.6 m	Helophyte. Early colonizer of sandy alluvium	Seasonal/temporary zone
<b><i>Cyperus latifolius</i></b>	0.3-0.9 m	Helophyte. Freshwater swamps and along river and streamlet margins and in local wet depressions in grassland	Permanent/Seasonal zone
<b><i>Cyperus natalensis</i></b>	1-1.3 m	Helophyte or mesophyte. In sandy soil in a wide range of conditions.	Permanent/seasonal zone
<b><i>Cyperus prolifer</i></b>	0.2-1.2 m	Emergent helophyte. Does not tolerate stagnant conditions or shading	Permanent zone

<i>Cyperus sensilis</i>	Up to 1.2 m	Emergent hydrophyte or helophyte. Loamy substrates with a high organic content and plentiful water (usually the margins of swamps and streamlets)	Permanent/seasonal zone
<b><i>Cyperus sexangularis</i></b>	0.3-1.5 m	Helophyte or occasionally emergent hydrophyte. Margins or rivers or streams and localized wet areas	Seasonal zone
<b><i>Cyperus solidus</i></b>	0.36-2 m	Mesophyte. Open grassland in sun, usually along water courses but seldom in water, often forming local stands	Temporary zone
<i>Cyperus sphaerospermus</i>	0.2-0.9 m	Mesophyte. Moist alluvium along margins of swamps and streamlets, often in pure stands	Seasonal zone
<b><i>Cyperus textilis</i></b>	0.6-1.2 m	Emergent hydrophyte or helophyte. Swampland and along rivers and streamlets, sometimes considered a southern variant of <i>C. involucratus</i>	Permanent/seasonal zone
<b><i>Eleocharis limosa</i></b>	0.3-0.8 m	Emergent hydrophyte or helophyte. Moist places, river banks and swamps.	Permanent zone
<b><i>Fimbristylis complanata</i></b>	0.1-0.79 m	Helophyte. Moist places, vlei edges.	Seasonal zone
<b><i>Fimbristylis ferruginea</i></b>	0.1-0.8 m	Helophyte. Wet habitats along the coast and up rivers	Permanent/seasonal zone
<b><i>Fuirena ecklonii</i></b>	0.38-0.75 m	Helophyte. In permanent water of shallow streamlets, seeps or vleis	Permanent zone
<b><i>Fuirena hirsuta</i></b>	0.45-1.09 m	Helophyte. Damp to wet situations, favouring riverine fringes and sandy substrate	Seasonal zone
<b><i>Fuirena pachyrrhiza</i></b>	Up to 1 m	Helophyte. Margins of vleis and near streams, often amongst shrubs fringing small patches of trees, where the continuity of forest has been disturbed	Seasonal zone
<i>Fuirena pubescens</i>	0.15-1 m	Helophyte or mesophyte. Grassland wet or damp for most of the growing period, vleis and river margins	Seasonal zone
<i>Isolepis costata</i>	0.1-0.65 m	Helophyte. Streambanks or vlei margins with silted verges	Permanent/seasonal zone

<i>Isolepis fluitans</i>	0.06-1.06 m	Emergent hydrophyte or helophyte. Vleis and drainage canals and ditches, extending into softly flowing water	Permanent zone
<i>Isolepis prolifera</i>	0.1-0.4 m	Helophyte. Bare sands or sandy alluvium where there is some accumulation of water	Permanent/seasonal zone
<i>Kyllinga erecta</i>	0.05-0.5m	Helophyte. Wet and marshy grasslands	Seasonal/temporary zone
<i>Liphocarpha chinensis</i>	0.05-0.55 m	Helophyte. Open swampy grassland and in vleis	Permanent zone
<i>Pycneus macranthus</i>	0.25-0.7 m	Helophyte, occasionally an emergent hydrophyte. Streamlet margins or very damp mud on fringes of drainage channels	Permanent/seasonal zone
<i>Pycneus nitidus</i>	0.05-0.76 m	Helophyte. Vleis	Seasonal/permanent zone
<i>Pycneus permutatus</i>	0.2-0.5 m	Helophyte. Margins of swamps, streamlets	Permanent/seasonal zone
<i>Pycneus polystachyos</i>	0.6-1.0m	Helophyte/mesophyte. Moist, often disturbed grasslands	Seasonal/temporary zone
<i>Rhynchospora Barrosiana</i>	0.12-0.63 m	Helophyte. Vleis	Permanent/seasonal zone
<i>Rhynchospora spectabilis</i>	0.27-1.21 m	Helophyte. Wet and very moist situations on sand	Permanent/seasonal zone
<i>Schoenoplectus erectus</i>	0.45-2.8 m	Emergent hydrophyte or helophyte. Margins of dams and rivers	Permanent zone
<i>Schoenoplectus scirpoideus</i>	0.1-0.65 m	Emergent hydrophyte or helophyte	Permanent/seasonal zone
<i>Schoenoplectus paludicola</i>	1-2 m	Emergent hydrophyte or helophyte	Seasonal zone
<i>Scleria melanomphala</i>	0.2-0.8 m	Helophyte. Permanent vleis, marshy ground and streambanks	Permanent zone
<i>Scleria natalensis</i>	0.6-1.8 m	Emergent hydrophyte or helophyte. Forms stands in permanently wet, open areas	Permanent zone

<b>JUNCACEAE (RUSHES)</b>			
<i>Juncus dregeanus</i>	0.01-0.4 m	Helophyte	Seasonal zone
<i>Juncus effusus</i>	0.45-1 m	Helophyte	Mostly permanent zone
<i>Juncus kraussii</i> subsp. <i>kraussii</i>	0.3-1 m	Helophyte	Mostly permanent zone
<i>Juncus lomatoxyllus</i>	0.04-1 m	Helophyte, hyperhydrite	Permanent zone
<i>Juncus oxycarpus</i> (very wet areas only)	0.06-1 m	Helophyte	Permanent zone
<i>Juncus punctorius</i>	0.45-1.5 m	Helophyte	Permanent zone
<b>WETLAND HERBS</b>			
<i>Berula erecta</i>		Hydrophyte	Permanent zone
<i>Canavalia bonariensis</i>		Climber on trees on edge of Swamp Forest	Temporary zone
<i>Chlorophytum krookianum</i>		Found in and on edge of wetlands but not in standing water. Usually in hygrophilous grassland or on edge of moist forest/Swamp Forest	Temporary zone
<i>Crinum macowanii</i>		A mesophyte not a helophyte, but sometimes in damp grassland	Temporary zone
<i>Chironia palustris</i>		In hygrophilous wetlands	Temporary zone
<i>Cyrtanthus racemosus</i>		In damp grassland	Temporary zone
<i>Cyrtanthus tubulosus</i>		In damp grassland	Temporary zone
<i>Cyrtanthus breviflorus</i>		In damp grassland. Due to highly variable form, a local form (Durban coast) must be used.	Temporary zone
<i>Derris trifoliata</i>		Climber on trees on edge of Swamp Forest	Permanent/temporary zone
<i>Dissotis canescens</i>		In damp and swampy grassland, wetlands but not in standing water	Temporary zone
<i>Dissotis princeps</i>		In damp and swampy grassland, wetlands but not in standing water	Temporary zone
<i>Hibiscus diversifolius</i>		In swamps and along watercourses	Temporary zone
<i>Flosocopa glomerata</i>		Helophyte	Permanent/temporary zone
<i>Kniphofia littoralis</i>		In wetlands but not in standing water	Temporary/seasonal zones

<i>Kniphofia pauciflora</i>		In damp grassland and wetlands but not in standing water	Temporary/seasonal zones
<i>Geranium flanaganii</i>		In damp grassland and scrub	Temporary zone
<i>Gladiolus papilio</i>		In swampy and damp grassland	Temporary zone
<i>Lotus discolor</i>		In damp grassland, often locally common on the edge of wetlands	Temporary zone
<i>Ludwigia ascendens subsp. diffusa</i>		Roots in shallow water with stems spreading out and floating on water surface.	Permanent zone, in standing water
<i>Ludwigia octovalvis</i>		Hydrophyte	Seasonal/temporary zone
<i>Morella serrata</i>		Shrub or small tree in wetlands and hygrophilous grassland but not in standing water	Temporary zone
<i>Persicaria</i> species (only <i>P. attenuata</i> , <i>decipiens</i> , <i>senegalensis</i> forma <i>albotomentosa</i> )		Indigenous species and helophytes and hydrophytes	Permanent zone
<i>Psoralea glabra</i>		Wetlands, moist grassland and moist forest edges, not in standing water	Temporary zone
<i>Pychnostachys reticulata</i>		In wetlands and marshy grassland	Temporary zone
<i>Ranunculus multifidus</i>		In wetlands, banks of watercourses and swampy grassland	Temporary/seasonal zones
<i>Senna petersiana</i>		Along watercourses	Temporary zone
<i>Syncolostemon densiflorus</i>		In wetlands, damp grassland and scrub, not in standing water	Temporary zone
<i>Tephrosia inandensis</i>		In damp grassland and scrub, not in standing water	Temporary zone
<i>Tephrosia shilwanensis</i>		In damp grassland, not in standing water	Temporary zone
<i>Xyris</i> species ( <i>capensis</i> , <i>congensis</i> , <i>natalensis</i> )		Helophytes and hydrophytes	Permanent/seasonal zones
<i>Zantedeschia aethiopica</i>		Wetlands, drainage lines and swampy grassland	Permanent zones (in shallow water) to seasonal zones

<b>TREES AND WOODY SHRUBS</b>			
<b>Typical species of Swamp Forest (note that at least 50% of trees planted into riparian wetland areas to replace alien trees should derive from this part)</b>			
<i>Barringtonia racemosa</i> (Powder-puff Tree)			Permanent/seasonal zone
<i>Bridelia micrantha</i> (Mitzeerie/Coastal Goldenleaf)			Seasonal zone
<i>Ficus capreifolia</i> (Sandpaper Fig)		A shrub, on edges only, in full or partial sun	Temporary zone
<i>Ficus sur</i> (Broom Cluster Fig)			Riparian edges
<i>Ficus lutea</i> (Giant-leaved Fig)			Seasonal zone
<i>Oxyanthus speciosus</i>			Temporary zone
<i>Phoenix reclinata</i> (Wild Date Palm)		On edges only, requires sun	Riparian edges
<i>Macaranga capensis</i> (Wild Poplar)			Temporary/seasonal zones
<i>Rauvolfia caffra</i> (Quinine Tree)			Temporary zone
<i>Syzygium cordatum</i> (Umdoni)		On edges only	Temporary/seasonal zone
<i>Shirakiopsis elliptica</i> (formerly <i>Sapium ellipticum</i> , the Jumping-seed Tree)			Temporary/seasonal zone
<i>Tarenna pavettoides</i> (False Bride's Bush)			Temporary zone
<i>Voacanga thouarsii</i> (Wild Frangipani)			Permanent/seasonal zone

<b>Plants which can be used to add diversity to the mix, on the edges away from immediately wet areas (no more than 50% of plantings next to riparian or wetland areas to replace alien trees should comprise these species)</b>			
<i>Albizia adianthifolia</i> (Flatcrown)			Terrestrial
<i>Apodytes dimidiata</i> (White Pear)			Terrestrial
<i>Baphia racemosa</i> (Natal Camwood)			Terrestrial
<i>Burchellia bubalina</i> (Wild Pomegranate)		Where it can get sunlight	Terrestrial
<i>Carissa macrocarpa</i> (Forest Num-num)			Terrestrial
<i>Croton sylvaticus</i> (Forest Fever-berry)			Terrestrial
<i>Cussonia sphaerocephala</i> (Forest Cabbage Tree)			Terrestrial
<i>Deinbollia oblongifolia</i> (Dune Soap-berry)		Where it can get sunlight	Terrestrial
<i>Dracaena alectrifomis</i> (Large-leaved Dragon Tree)		Needs shade	Terrestrial
<i>Drypetes arguta</i> (Water Ironplum)			Terrestrial
<i>Drypetes natalensis</i> (Natal Ironplum)			Terrestrial
<i>Englerophytum natalense</i> (Natal Milkplum)		Needs shade	Terrestrial
<i>Ekebergia capensis</i> (Cape Ash)			Terrestrial
<i>Erythrina lysistemon</i> (Coast Coral Tree)		Where it can get sunlight	Terrestrial
<i>Ficus burkei</i> (Common Wild Fig, previously incorrectly called <i>F. thonningii</i> )			Terrestrial
<i>Ficus natalensis</i> (Natal Fig)			Terrestrial
<i>Ficus polita</i> (Heart-leaved Fig)			Terrestrial
<i>Harpephyllum caffrum</i> (Wild Plum)			Terrestrial
<i>Millettia grandis</i> (Umzimbeet)			Terrestrial
<i>Mimusops obovata</i> (Red Milkwood)			Terrestrial
<i>Pittosporum viridiflorum</i> (Cheesewood)			Terrestrial
<i>Protorhus longifolia</i> (Red Beech)			Terrestrial
<i>Sideroxylon inerme</i> (White Milkwood)			Terrestrial
<i>Strelitzia nicolai</i> (Wild Banana)			Terrestrial
<i>Tabernaemontana ventricosa</i> (Forest Toad-tree)			Terrestrial
<i>Trema orientalis</i> (Pigeonwood)			Terrestrial

<i>Tricalysia lanceolata</i> (Jackal-coffee)			Terrestrial
<i>Trichilia dregeana</i> (Forest Mahogany)		Where it can get sunlight	Terrestrial
<i>Trichilia emetica</i> (Natal Mahogany)		Where it can get sunlight	Terrestrial
<i>Xylothea kraussiana</i> (African Dog-rose)		On edges only, where it can get sunlight	Terrestrial
<i>Ziziphus mucronata</i>			
<b>Herbaceous layer Swamp Forest elements (for planting only where the residue of indigenous trees supports shady, damp conditions, or when plantings of indigenous trees result, in time, in supporting these conditions:</b>			
<i>Crinum moorei</i>			Permanently damp to wet areas in shade
<i>Isoglossa woodii</i>			Damp to mesic areas
<i>Plectranthus ciliatus</i> (only from cuttings grown on from plants occurring naturally in proximity to the site. Several swamp forest sites including this species occur between Ballito and Sheffield Beach)			Permanently damp to wet areas in shade
<i>Scadoxus multiflorus</i> subsp. <i>katharinae</i>			Permanently damp to wet areas in shade
<b>HYGROPHYTIC/HYGROPHILOUS GRASSES</b>			
<i>Agrostis lachnantha</i> var. <i>lachnantha</i>	0.3-0.9 m	Hygrophilous grassland	Seasonal zone
<i>Andropogon appendiculatus</i>	Up to 1.4 m	Hygrophilous grassland	Seasonal zone
<i>Bothriochloa bladhii</i>	Up to 1.8 m	Hygrophilous grassland	Seasonal/temporary zone
<i>Bothriochloa insculpta</i>	Up to 2 m	Hygrophilous grassland	Temporary zone
<i>Cynodon dactylon</i>	0.05-0.35 m	Hygrophilous grassland	Temporary zone
<i>Dactyloctenium australe</i>	Up to 0.8 m	Swamp forest edges	Temporary zone
<i>Hemarthria altissima</i>	Up to 2.5 m	Hygrophilous grassland	Seasonal zone



<i>Imperata cylindrica</i>	Up to 1.2 m	Hygrophilous grassland	Seasonal/temporary zone
<i>Ischaemum fasciculatum</i>	Up to 1.25 m	Hygrophilous grassland	Seasonal zone
<i>Leersia hexandra</i>	Up to 1.25 m	Sedge meadows	Permanent zone
<i>Miscanthus capensis</i> (use only extremely sparingly in any mix)	Up to 2.4 m	Hygrophilous grassland	Temporary zone
<i>Oplismenus hirtellus</i>	Trailing to 1 m	Swamp forest edges	Temporary zone
<i>Paspalum scrobiculatum</i>	Up to 0.7m	Hygrophilous grassland	Temporary zone
<i>Setaria sphacelata</i>	1-2 m	Hygrophilous grassland	Temporary zone