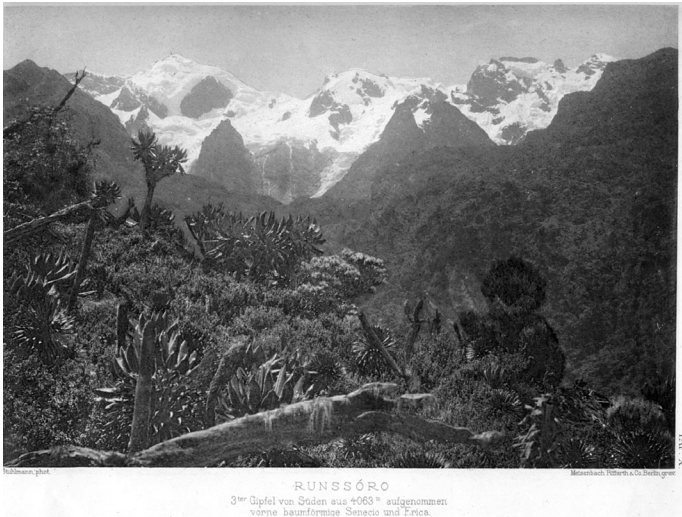


Common plants of the Rwenzori, particularly the upper zones

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Introduction

This is based on observations during a circuit in January 2006 by Berit Gehrke, Rod and Rachel Saunders and Peter Linder. In addition, we used “Common plants of the Rwenzori Central Trail Circuit”, Olov Hedberg’s Afroalpine flora, Haines & Lyes The Sedges and Rushes of East Africa and the Flora of Tropical East Africa.

Nomenclature is based on the “Database of the flowering plants of Africa South of Sahara”

(<http://www.ville-ge.ch/cjb/bd/africa>)

This version does not include any ferns, lichens or mosses.

Although we are attempting to get the flora of the alpine zone complete, that of the forest zone is much more complex.

Vegetation belts

Evergreen forest

Up to 2’800 m. There is substantial change in the species composition from the entrance to the park at 1’600 m to the upper margins of the forest. The flora of the forest is remarkably rich, and here we list only some species.

Along the upper margins of the forest zone extensive open patches develop on the steep slopes, these are dominated by bracken and various climbers.



Bamboo Zone

Between 2'800 and 3'300 m

Bamboo thickets are never continuous, interdigitate with forest and heath-forest, as well as open *Hagenia abyssinica* parkland. The *Hagenia-Hypericum*-zone may be regarded as the upper margin of this zone.

This woodland frequently contains various species of *Hypericum* or St Johns Wort.

The bamboo zone contains several remarkable plants, like *Scadoxus cyrtanthiflorus*, *Impatiens* spp., *Mimulopsis elliotii*.



Heather forest

Located between 3'000 and 3'800 m, the altitudinal margins fluctuate somewhat.

This forest is dominated by diverse *Erica* species (or maybe just one?), and is characterized by the massive load of mosses on the plants, as well as the *Usnea* hanging from the branches. In this zone the first bogs also occur, and in the streamlines Alpine elements penetrate deep into the heath zone.

Possibly the most striking species of this zone is *Disa stairsii*.



Alpine zone

Between 3'500 and 4'500 m.

This remarkable vegetation formation contains several structural forms, but very few species.

Alchemilla carpets

These are found in open areas on better drained but still moist soils. They may form big areas or small patches between the *Carex runssoroensis* tussocks in bogs and in 'Dendrosenecio woodlands'. Dominated in the lower zones by *A. argyrophylla*. Above 4000m *A. subnivalis* becomes the dominant species with occasional shrubs of *A. triphylla* and *A. stuhlmanii*. *A. johnstonii* is often found creeping on the ground or climbing up between the other woody species, can locally become the dominant species.



Bogs

These are generally dominated by *Carex runssorensis*, but also often include scattered *Dendrosenecio adnivalis*, *Helichrysum stuhlmannii*, *Lobelia stuhlmannii*, *L. wollastonii*, and on the ground *Subularia monticola*, *Ranunculus oreophytus*, and several grasses.



Dendrosenecio woodland

On better drained slopes, but with deeper soils, dominated by *Dendrosenecio adnivalis*, and on steeper or drier slopes, *D. erici-rosenii*, *Arabis alpina*, *Senecio transmarinus*, *Peucedanum kerstenii*, and much *Galium ruwenzoriensis*. These forests can be to 8 m tall, dense, and very lush.

In mesic places *Hypericum bequaertii* may also be part of this.



Scree slopes

On steep slopes with recent screes the gaint senecios are not found, and common elements of this much lower vegetation are *Festuca abyssinica* and *Senecio mattirolii*. Mosses can form particularly dense carpets in this zone.



Nival zone

4'400 to 5'000 m

Although gaint senecios are found as small plants to the upper margins of the vegetation, they do not seem to flower up there. Instead, the vegetation is sparse, and the most common angiosperms include *Poa ruwenzoriensis* and *Helichrysum stuhlmannii* (form with very woolly leaves)



Species list

This list includes those species for which we have pictures, or some information. The list is neither complete, nor selected rationally. We will welcome any more images, either better than the ones we have, or of further species, to extend what we have here.

Ferns and Fern-allies

Ferns are very common, but we have not documented them. We include the single fern-ally below, because it is such a visible and remarkable plant.



Huperzia saururus

Lycopodiaceae

Huperzia saururus. A remarkable growth of bottle-brush-like stems beset with numerous thick, small leaves, plants ca. 30 cm tall. Alpine zone.

Gymnosperms

Podocarpaceae

Podocarpus latifolia. Afremontane forest tree, with linear, leathery leaves. alt. 2'000-2'600 m



Scadoxus cyrtanthiflorus

Monocots

Amaryllidaceae

Scadoxus cyrtanthiflorus. Striking red flowers, plants with rhizomes on the forest floor in the bamboo zone. Alt. 2'600-3'000 m

Araceae

Arisaema mildbraedii. Arum-like plant with a lobed leaf, in shade of bamboo forest, Alt. 2'600-2'900 m.



Arisaema mildbraedii

Cyperaceae

Carex bequaertii. Plants to 2 m tall; leaves yellowish green, inflorescence up to 3 m tall, and with several thick pendulous spikes. Growing in dense tussocks often in groups at the edge of swamps or wet places. Common in the bamboo and heather zone but reaching to the alpine zone.



Carex bequaertii

Carex conferta var. *leptosaccus*. Plants forming large tussocks, inflorescence a dense terminal panicle, brownish green. In open, wet spots often near seepages or running water. In the bamboo and upper montane zone.

Carex johnstonii. Plants up to 1.5 m tall, mostly solitary but can form tussocks, leaves dark-green with a red base, inflorescence an open panicle often reddish, perigynium very long and slender. Common in open and dry places in the upper forest zone.



Carex conferta var. *leptosaccus*

Carex runssoroensis. Dominant in the alpine zone, forming large raised tussocks (or dense stands on creeping rhizomes), stems blue-green with a single terminal dark brown spike.



Carex runssoroensis



Carex johnstonii

Carex simensis. Plants 50-80 cm tall with broad, distinctly erect leaves and very dark brown to black glumes with a green midrib. Mostly in the heather zone.

Carex vallis-rosetto. Plants 1.5 m tall, forming big tussocks, spikes slender reddish-brown spikes. Common in the bamboo and heather zone.

Luzula johnstonii. Plants up to 50 cm, flowers in dense, elliptic to oval, dark brown or black heads. Heath zone.

Carpha eminii. Plants forming big tussocks, leaves slender, appearance is *Carex* like but the rachilla extends through the perigynium. Heather zone and lower alpine area



Carex simensis



Luzula johnstonii

Orchidaceae

Disa stairsii. Common cardinal-red terrestrial orchid in the heathbelt, where it generally grows in moss. Distinct by its single spur borne on top of the flower. Alt. 2'800-3'400 m.

Polystachya sp. Yellow-flowered epiphyte, sometimes also growing on mossbanks on cliffs. In the bamboo zone, ca. 3'000 m. Forming very large banks of plants.



Disa stairsii

Habenaria sp. A number of terrestrial species, often with green or yellowish to whitish green flowers, a single spur borne below the flower. Distributed in the heather and the alpine zone but some species can also be found in the *Hagenia* or upper montane zone



Habenaria sp.

Satyrium crassicaule. Spikelike orchid with pink flowers, and two spurs borne on top of the flower. Local on wet sunny clearings, alt. 3'700 m.



Satyrium crassicaule

Poaceae

Agrostis gracilifolia. Slender erect grass, with a fine foliage. Alpine.

Deschampsia caespitosa. Common robust grass in wet bogs, often locally dominant, golden in colour with ample somewhat pendulous inflorescences.

Deschampsia flexuosa. Locally dominant grass, especially on rock ledges and under overhangs. In these habitats it forms a fine, soft complete cover, and flowers very rarely.

Festuca abyssinica. Common grass, especially dominant on steep gravelly slopes, stiffly erect with spikelet inflorescence. Alpine. Alt. 3'500-4,500 m.



Deschampsia caespitosa



Festuca abyssinica

Helictotrichon sp. Local, long drooping inflorescences.

Pentaschistis borussica. Very local on rock and in moss, forming clumps, distinct by the two-flowered spikelets, lemmas with three awns. Alpine: alt ca. 3'800 m.

Poa annua. Very common fine grass around huts and disturbed areas. Afroalpine. Alt. 3'700-4'500 m.

Poa ruwenzoriensis. Perennial with a short spreading rhizome and relatively wide leaves, inflorescence lobed, purplish, pendulous. Common alpine grass, alt. 3'700-4'500 m

Poa schimperana. Soft spreading grass, local in alpine zone often with *Dendrosenecio*.

Sinarundinaria alpina. Massive bamboo in the bamboo zone, 2'700-3'000 m.



Pentaschistis borussica



Poa annua



Poa schimperana



Poa ruwenzoriensis

Dicots

Acanthaceae

Mimulopsis elliotii. Shrub to 2 m tall, common element of the bamboo zone, distinctive by the relatively large, cream, flowers. Alt. 2'700-3'700 m.



Mimulopsis elliotii

Apiaceae

Peucedanum kerstenii. Shrublike umbell, grows to 2 m tall, often with a very distinct stem. Found particularly in woodlands, alpine zone, alt 3'500-4'200 m.

Haplosciadium abyssinicum. Small, mat-forming plant with a thick taproot, finely dissected leaves, and an almost sessile inflorescence. Alpine zone, 4'000 m, growing in mossbeds.



Peucedanum kerstenii

Araliaceae

Polyscias fulva. Tall umbrella-like tree with divergent branches each with apical rosettes of leaves. Forest zone, alt. 1'700-2'200 m.



Haplosciadium abyssinicum

Asteraceae

Carduus ruwenzoriensis. Tall thistle 1-2m tall unbranched pyramidal shaped with the biggest leaves near the ground. Flowers light pink, stamens darker. Near rivers or seepages.



Carduus ruwenzoriensis

Crassocephalum ducis-aprutii. Shrub to 2 m, leaves ovate-lanceolate, flowerheads without ray-florets, heathzone and lower alpine zone.



Crassocephalum ducis-aprutii

Dendrosenecio adnivalis. Tree senecio to 6 m tall, old leaves persistent around the culm, flowerheads with no or very small ray-florets, alpine zone, more common on wetter soils.

Dendrosenecio erici-rosenii. Tree senecio to 6 m tall, old leaves dropping leaving a very slender stem, flowerheads with prominent yellow ray-flowers, alpine zone. Typically more on sloping, better-drained soils.



Dendrosenecio erici-rosenii

Helichrysum cymosum. Herb or small shrub, less than 1 m tall. Flowerheads brown or gold, tiny, clustered tightly into large buttons. Alpine zone. Alt. 3'700 m.



Helichrysum cymosum

Helichrysum formosissimum. Shrub to 2 m tall, flowerheads 2-3 cm in diameter, white to pink, leaves more or less hairless. Heathzone, alt. 2'700-3'000 m.

Helichrysum guilelmii. Shrub to 2 m tall, flowerheads 2-3 cm in diameter, white to pink, leaves long-woolly, especially under the inflorescence. Alpine zone. Alt. 3'500-4'000 m.

Helichrysum stuhlmannii. Shrub to 2 m tall, leaves tongue-shaped, glabrous to hairy, the dominant shrub in the alpine zone. Alt. 3'500-4'500 m.



Helichrysum stuhlmannii



Helichrysum stuhlmannii



Helichrysum formosissimum



Helichrysum guilelmii

Senecio mattirolii. Herb to 50 cm tall, leaves lobed, inflorescence of a few flowerheads without rays, purple-coloured. Common on open, stony slopes in alpine zone. Alt. 3'700-4'200 m.

Senecio transmarinus. Herb to 50 cm tall, leaves lobed, somewhat waxy or sparsely hairy, inflorescences with several flowerheads with striking large yellow ray florets. Heath and alpine zone, alt. 3'000-4,200 m. Plants at lower altitudes much larger than at higher altitudes.

Senecio maranguensis. Shrub to 2 m tall, locally common in forest and bamboo clearings, flowerheads with yellow ray florets.

Senecio sp. Shrub to 2 m tall, with large button-like yellow ray-less flowerheads. Leaves lanceolate, petiolate. Local in alpine zone, in sheltered habitats, often associated with *Dendrosenecio* thickets. Alt. 3'800-4'100 m.

Vernonia calvoana. Shrub to over 2 m tall, flower heads very striking white, with enlarge white bracts mimicking numerous petals. In the *Hagenia* zone, seen only once.



Senecio mattirolii



Senecio transmarinus



Vernonia calvoana



Senecio sp.



Impatiens apiculata

Balsaminaceae

Impatiens spp. There are several species, distinct by the brightly coloured flowers, with a curved spur to the rear, often twining through the vegetation, mostly in the bamboo zone, not seen above this. *Impatiens apiculata* is widely distributed and has big pink flowers. There is another common species in the heather zone, *I.runssorensis* with smaller red and mauve flowers.

Begoniaceae

Begonia sonderiana (= *B. meyeri-johannis*). A climber to 5m in the forest-bamboo zone. There are at least two more species but both with winged fruits *B. wollastoni* with reddish-orange flowers and *B. keniense* an erect herb with big pinkish white flowers. Begonias are distinct by the oblique leaves. Found in forest understory and damp habitats, in the forest and bamboo zones.



Begonia sonderiana

Bignoniaceae

Kigelia africana. Small tree with striking sausage-like fruits. Forest zone, alt. 1'700-2'000 m.

Brassicaceae

Arabis alpina. Very common white flowered herb with 4 petals, plants to 30 cm tall, in alpine zone. Alt. 3'600-4,200 m.

Cardamine obliqua. Herb with somewhat waxy lobed lobes and purplish flowers, with 4 petals, plants to 30 cm tall. Alpine zone. Alt. 3'500-4'200 m.

Subularia monticola. Cushion-forming herb, more



Arabis alpina



Subularia monticola



Cardamine obliqua



Subularia monticola

rarely mat-forming, usually along the margins of ponds or in very wet habitats, common in muddy footpaths, flowers tiny, white. Alpine. Alt. 3'000-4'000 m.

Clusiaceae

Symphonia globulifera. Afromontane forest tree, with striking red flowers, alt. 2'000-2'400 m.

Caryophyllaceae

Cerastium cf. afromontanum. small herb with white flowers, sepals 5, leaves opposite, entire, with glandular hairs. Plant up to 15 cm tall, prostrate to ascending. Common in open rather wet slopes from the upper forest to the lower alpine zone.

Crassulaceae

Sedum ruwenzoriense. Yellow flowers spreading plant with finger-like succulent leaves, found in alpine zone in locally dry habitat, Alt. 3'900-4'300 m.

Ericaceae

Several *Erica* species, but these are difficult to name since they have not been treated in the flora of East Tropical Africa.

Fabaceae

Erythrina abyssinica. Common treelet with red flowers, almost leafless in the dry season, alt. 1'600-2'000 m.

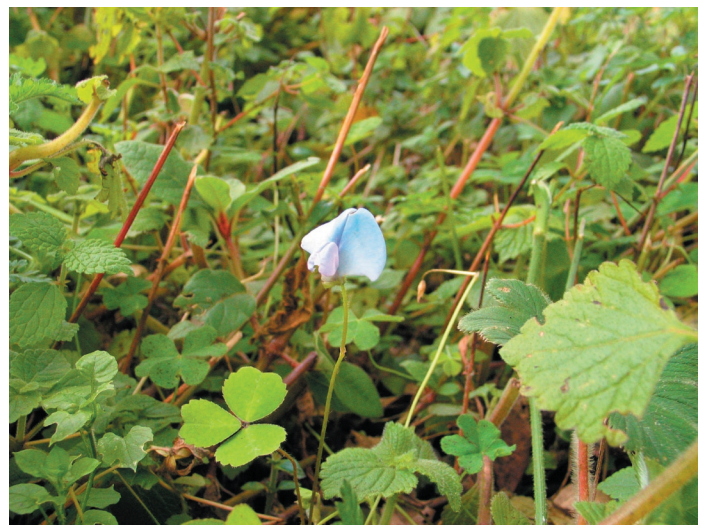
Parochaetus communis. Small prostrate herb, somewhat *Trifolium* like. Flowers single or in pairs, long stalked and blue. Leaves stalked divided in three leaflets, somewhat irregular in shape. Common especially in the bamboo zone.

Geraniaceae

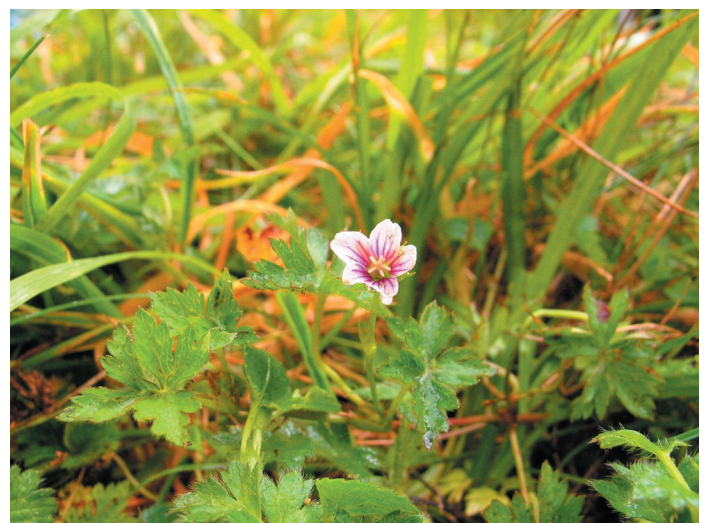
Geranium simense. Small flowered geranium. Alt. 3'000-3'500 m.



Sedum ruwenzoriense



Parochaetus communis



Geranium simense

Hypericaceae

Hypericum bequartii. Tree to 10 m tall, leaves linear to tongue-shaped, flowers tulip-like, red. Afroalpine, alt. 3'800-4'100 m.

Hypericum peplidifolium. Small creeping herb. Petals orange yellow with black dots on the edges. Leaves ovate-elliptic. In wet and open places.

Hypericum revolutum var. *kiboense*. Evergreen shrub or tree. Yellow flowers. In open forest. From the upper montane zone to the lower alpine areas.



Hypericum bequartii



Hypericum revolutum

Lamiaceae

Satureja simensis. Small herb to 30 cm tall, in the bamboo zone, with deeply bilobed purplish-white flowers.



Satureja simensis

Lobeliaceae

Lobelia giberroa. Plant 2 – 4 m tall with a terminal inflorescence rising up to 4 m. Whole plant yellow-green, leaves grading into the inflorescence, floral bracts linear, forest and bamboo zone, alt. 2'400-3'000 m.



Lobelia giberroa



Lobelia bequaertii

Lobelia bequaertii. Robust plant, 1 - 5 m tall with a big leaf-rossette up to 80 cm in diameter, terminated by a flower spike. The only *Lobelia* with broad almost bowl-shaped floral bracts. Bogs in the upper heathforest zone, alt. 3'000-3'500 m.

Lobelia stuhlmannii. Tall plant, floral bracts linear, somewhat hairy, leaves forming a rosette at the top of the stem terminated by a flower spike. Alt. 3'300-3'600 m.

Lobelia wollastonii. Tall plant, up to 7 m, terminated by a flower spike up to 2 m long, floral bracts linear, leaves spreading somewhat down the stem, flowers and bracts more hairy than in *L. stuhlmannii*, alt. 3'700-4'300 m.

Lobelia sp. small herbaceous plant up to 1 m tall. Flowers not in a flower spike.

Myrsinaceae

Rapanea melanophloeos. Afromontane and heathforest tree, leaves thick, petiole reddish. 2'600-3'600 m.

Onagraceae

Epilobium salignum Erect herb, up to 1 m tall, with appressed very short hairs, leaves opposite, entire, lanceolate, remotely toothed, flowers small creamy white or purplish pink, whole plant dark green to reddish purple. In wet bogs or swampy places near streams.

Piperaceae

Peperomia sp. Epiphyte in the forest and bamboo zone, with thick leaves and slender spikelike inflorescences.

Piper capense. Shrub, to 2 m tall, in the forest zone, at ca. 1'700 m. Inflorescences white.

Proteaceae

Fauria saligna. Afromontane forest tree, with very rough bark, alt. 2'000-2'600 m.



Fauria saligna



Lobelia wollastonii



Rapanea melanophloeos



Piper capense

Ranunculaceae

Clematis simensis. Climber, leaved divided with up to 5 dark green leaflets. Flowers many, cream white. Seen at about 3600m.

Ranunculus oreophytus. Geophytic plant making a robust rosette of leaves and bearing yellow flowers from the centre of the rosette, stalks bent down to the soil at fruiting. Frequent in the alpine zone.



Ranunculus oreophytus

Ranunculus stagnalis. Geophytic plant with leaves in a rosette, divided into three leaflets, flowers with white petals, stalks bent down to the soil at fruiting. Between *Carex runnsoroensis* tussocks or seasonally flooded places. Uncommon.

Ranunculus multifidus. Erect or spreading herb common in forest and bamboo zone, middle lobe of leaves larger than the other lobes, flowers with reflexed sepals. Very common from the forest zone to the heather zone.



Ranunculus stagnalis

Ranunculus volkensis. Creeping perennial with undivided, triangular to circular leaves. Flowers solitary, yellow, small (10 mm in diameter). On very moist ground, often growing in standing water or shallow pits. Common.

Thalictrum rhynchocarpum. Erect shrublike plants to 2 m tall, compound leaves appearing fern-like with many oval or roundish leaflets, flowers small in terminal inflorescence, petals absent, 3 sepals green or dark violett. Occasional in the bamboo zone.



Ranunculus volkensis

Rosaceae

Hagenia abyssinica. Tree to 15 m tall, with very distinctive compound leaves, flaky bark, and massive male inflorescences. Occasional to frequent in the bamboo belt, Alt. 2'900-3'300 m.

Alchemilla argyrophylla. Small much branched shrub, covered in dense hairs and appearing silvery green; the leaves are divided in 3, the outer leaflets entire, and the terminal lobe is much bigger, with 3 distinct teeth.

Alchemilla johnstonii. Spreading or climbing herb, very variable in shape and size; the leaves often appearing folded, with 3-5 (-7) leaflets. Very common in the alpine zone.

Alchemilla kiwuensis. Spreading herb, leaves deeply dissected into 5 lobes, stem often red. Very common in the upper montane and Hagenia zone.

Alchemilla microbetula. Small herb appressed to the ground growing in dense patches. Common in bogs and in the alpine zone.



Hagenia abyssinica



Alchemilla kiwuensis



Alchemilla argyrophylla



Alchemilla microbetula



Alchemilla johnstonii

Alchemilla stuhlmannii. Much branched shrub, leaves 3 lobed, the terminal lobe bigger than the side lobes, lobes not all divided to the base, leaves basally cuneate. Alpine area.

Alchemilla subnivalis. Much branched erect or spreading shrub, leaves all undivided. Alpine areas.

Alchemilla triphylla. Much branched shrub, leaf lobes all about the same size, but lateral lobes terminally dentate. Alpine zone.

Rubus cf. steudneri. Common in the bamboo zone, with striking large pink flowers and small berries that are quite tasty. A very spiny climber. Found below 3'500 m in heath and forest zones.



Alchemilla subnivalis



Alchemilla triphylla



Rubus cf. steudneri

Rubiaceae

Galium ruwenzoriense. Fine climber with leaves with retrorse bristles, small greenish flowers and large red to black berries, common on Dendrosenecios. Alpine zone, alt. 3'500-4'200 m.



Orobanchaceae

Bartsia macrophylla. Shrub to 1.5 m tall, soft, leaves lorate, margins crenate, flowers among the upper leaves, yellow. Alpine. Alt. 3'500-4'000 m.



Violaceae

Viola simense. Small blue violet generally forming mats over rocks in sunny places. Heath zone, alt. 3'000-3'800 m.

Futher species which we have no images of, but which are quite remarkable, are *Urtica masaica*, *Dracaena afromontana*, *Ensete edule*, *Plantago palmata*, *Dombeya elliottii*, *Cyathea* sp.



Galium ruwenzoriense



Viola simense



Bartsia macrophylla

Species List

Agrostis gracilifolia
Alchemilla argyrophylla
Alchemilla johnstonii
Alchemilla kiwuensis
Alchemilla microbetula
Alchemilla roccatii
Alchemilla stuhlmannii
Alchemilla subnivalis
Alchemilla triphylla
Arabis alpina
Arisaema mildbraedii
Bartsia macrophylla
Begonia sonderiana
Cardamine obliqua
Carduus ruwenzoriensis
Carex bequaertii
Carex conferta var. *leptosaccus*
Carex johnstonii
Carex mannii
Carex runssoroensis
Carex simensis
Carex vallis-rosetto
Carpha eminii
Cerastium cf. *afromontanum*
Cerastium octandrum var. *adnivale* (?)
Clematis simensis
Crassocephalum ducis-apruti
Dendrosenecio adnivalis
Dendrosenecio erici-rosenii
Deschampsia caespitosa
Deschampsia flexuosa
Disa stairsii
Epilobium cf. *salignum*
Erythrina abyssinica
Fauria saligna
Festuca abyssinica
Galium ruwenzoriense
Geranium simense
Habenaria sp.
Hagenia abyssinica
Haplosciadium abyssinicum
Helichrysum cymosum
Helichrysum formosissimum
Helichrysum guilelmii
Helichrysum stuhlmannii
Helictotrichon sp.
Huperzia saururus
Hypericum bequaertii
Hypericum peplidifolium
Hypericum revolutum var. *kiboense*
Impatiens apiculata

Kigelia africana
Lobelia bequaertii
Lobelia giberroa
Lobelia sp.
Lobelia stuhlmannii
Lobelia wollastonii
Luzula johnstonii.
Mimulopsis elliotii
Parochaetus communis
Pentaschistis borussica
Peperomia sp.
Peucedanum kerstenii
Picnostachys
Piper capense
Poa annua
Poa ruwenzoriensis
Poa schimperana
Podocarpus latifolia
Polyscias fulva
Polystachya sp.
Ranunculus multifidus
Ranunculus oreophytus
Ranunculus stagnalis
Ranunculus volkensis
Rapanea melanophloeos
Rubus cf. *steudneri*
Satureja simensis
Satyrium crassicaule
Scadoxus cyrtanthiflorus
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Senecio maranguensis
Senecio mattirolii
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Senecio transmarinus
Sinarundinaria alpina
Subularia monticola
Symphonia globulifera
Thalictrum rhynchocarpum
Viola simense