

CRASSULACEAE

THREE NEW TAXA AND A NEW COMBINATION

Adromischus diabolicus Toelken, sp. nov. (sect. *Brevipedunculati*) a speciebus aliis foliis dorsiventraliter complanatis, inflorescentia brevi, 1,2(3) floribus parvis differt.

Herbae perennes base ramosissima carnosa ramis 4–8 mm in diametro et rare longioribus 10 mm, vel usque ad 80 mm longis eramosis et 3–4 mm in diametro umbra. *Folia* obovata vel orbicularia, rare elliptica (6–) 8–12 (–14) mm longa, 6–9 (–11) mm lata, apicibus rotundis, leviter convexa super et subtus, viridia vel griseo-fusca saepe rubrotincta ad apices. *Inflorescentia* cyma speciformis 1.2 (3) floribus; pedunculus 30–60 mm longus, glabrus. *Calyx* viridis vel porphyreus; lobi anguste triangulares, 2–3 mm longi, glabri praeter trichomates aliquot intra. *Corolla* 15–16,5 mm longa; tubus infundibuliformis 12,5–14 mm longus, glabrus extus, trichomatibus clavatis intra praesertim in fauce; lobi triangulari-ovati, acutiores, patentes vel recurvi, albi praeter costas medias atromalvaceas extus. *Stamina* inaequalia, 12,5–13 mm vel 14–15 mm longi, filamentis glabris, antheris stamium longiorum 2–2,2 mm longis et breviorum c. 1,5 mm longis. *Squamae* oblongae 1,8–2,1×0,7–1 mm, profunde emarginatae, vix

succulentae, albae. *Carpella* overiis gracilibus gradatim constrictis ad stylos erectos stigmatibus terminalibus; ovarium 20–26 ovulis.

TYPE.—Cape, near Blesberg Mine, *Drijfhout* 1942 (PRE, holo. !; STE!).

Perennial with much-branched carnosose base with individual branches 4–8 mm in diameter and rarely longer than 10 mm, or up to 80 mm long, unbranched and 3–4 mm in diameter in deep shade. *Leaves* obovate to orbicular, rarely elliptic (6–) 8–12 (–14) mm long, 6–9 (–11) mm broad, with rounded apex, slightly convex above and below, green to greyish-brown, often tinged red towards the apex. *Inflorescence* a spike-like cyme with 1,2 (3) flowers; peduncle 30–60 mm long glabrous. *Calyx* green to reddish-brown; lobes narrowly triangular, 2–3 mm long, glabrous except for a few trichomes on the inside. *Corolla* 15–16,5 mm long; tube funnel-shaped, 12,5–14 mm long, glabrous outside and with club-shaped trichomes inside, particularly in the throat; lobes triangular-ovate, sharply acute, spreading or recurved, white except for deep mauve line on outside along the middle of each petal. *Stamens* in 2 unequally long whorls, 12,5–13 or 14–15 mm long with glabrous

filaments; anthers of longer stamens 2–2,1 mm long and anthers of shorter ones c. 1,5 mm long. *Squamae* oblong, 1,8–2,1 × 0,7–1 mm, deeply emarginate, scarcely fleshy, white. *Carpels* with slender ovaries gradually constricted into erect styles with terminal stigmas; ovary with 20–26 ovules, up to three times longer than broad.

Growing in shaded crevices on rock faces, usually on south-facing aspects; recorded only from near Aggenys and Vioolsdrif.

Plants without flowers may easily be mistaken for depauperate specimens of *A. montium-klingshardtii*. The flowers, and especially the short inflorescence, are similar to that of *A. nanus* which is, however, distinguished by its thick leaves.

***Crassula alba* var. *pallida* Toelken, var. nov.**

Calyx 1–2 mm longus, plerumque dentibus marginalibus in lobis. *Corolla* 2–3 (–4) mm longa, lobis patentibus, leviter recurvis et plerumque papillois, eburnea vel pallide flava.

TYPE.—Swaziland, near Forbes Reef, Tölken 5694 (PRE, holo.!).

Calyx 1–2 mm long, usually with marginal teeth on lobes. *Corolla* 2–3 (–4) mm long, with lobes spreading or slightly recurved, usually papillose, cream to pale yellow.

Usually growing on shallow soil on ledges above rock faces; rare in mountains NE of Mbabane, but also recorded from Mount Sheba near Pilgrim's Rest.

This variety was previously included as a form of var. *parvisepala* but, when investigated *in situ*, it was found that, although it is not completely ecologically separated from that variety, the two taxa are always distinct. Only one plant of a putative hybrid of *C. alba* var. *alba* × var. *pallida* (Tölken 5697) was found.

***Crassula subacaulis* Schonl. & Bak. f.**

Plants of this species are extremely variable and unfortunately the only specimen of the type collection seen does not include the basal stem. Additional material and investigations of plants at the type locality revealed that this species is a tufted form which Tölken (1977) included under *C. erosula*. Plants grown in a glass house never changed their tufted habit except when they were grown in deep shade and developed somewhat elongated internodes; the intermediates reported earlier may be explained in the light of this observation. The leaves of both subspecies may vary from glabrous to velvety.

The two subspecies grow in slightly different habitats, but were never found at the same locality.

subsp. *subacaulis*.

C. subacaulis Schonl. & Bak. f. in J. Bot., Lond. 36: 370 (1898). Type: Cape, Steinkopf, Schlechter 11498 (GRA, holo.!).

Plants forming dense tufts 0,15–0,3 m across; branches repeatedly branching and with internodes not elongating.

Growing on lower gravelly slopes together with other acaulescent plants; occurring east of the coastal mountains from Lekkersing to north of Steinkopf.

subsp. *erosula* (N.E. Br.) Toelken, stat. nov.

C. erosula N.E. Br. in Kew Bull. 1913: 300 (1913); Schonl. in Trans. Roy. Soc. S. Afr. 17: 278 (1929); Tölken in Contr. Bolus Herb. 8: 545 (1977). Type: Cape, Doornpoort Ravine, Pearson 6153 (K, holo.!).

Plants with several erect branches up to 0,3 m high; branches sparsely branched and mainly from the base, with internodes (3–) 4–20 (–30) mm long.

Growing on gravelly slopes, but usually in association with other shrubs; occurring mainly along the coastal mountains from south-western South West Africa to near Pakhuis Pass near Clanwilliam.

***C. vaginata* Eckl. & Zeyh.**

Several of the forms previously discussed by Tölken (1977) were recently reinvestigated in the field. It was found that the white-flowered plants in some localities can be distinguished by their lanceolate leaves, but in the northern Drakensberg even this characteristic can no longer be used to identify the two forms.

Subsp. *minuta*, which was previously thought to represent a hybrid between *C. vaginata* and *C. alba* var. *parvisepala* (Tölken, 1977), proved to be a well distinguished taxon. It is not only much smaller, but also adapted to its specific habitat on granite rocks.

subsp. *vaginata*.

C. vaginata Eckl. & Zeyh., Enum. 298 (1837). Type: Cape, Katrivierberg near Phillipstown, Ecklon & Zeyher 1903 (S!).

Plants with 1(2) erect inflorescences. *Leaves* with lamina (4–) 6–20 (–35) mm broad; sheath 8–20 mm long on erect stem.

Widespread in temperate grassland from the eastern Cape through Natal to northern Transvaal, but also extending into many parts of tropical Africa and Arabia.

subsp. *minuta* Toelken, subsp. nov.

Plantae (1) 2–5 (–8) inflorescentiis erectis vel decumbentibus. *Folia* laminis 2–3 mm latis; vagina usque ad 5 mm longa.

TYPE.—Swaziland, Mbabane, Tölken 5696 (PRE, holo.!).

Plants with (1) 2–5 (–8) erect or decumbent inflorescences. *Leaves* with lamina 2–3 mm broad; sheath up to 5 mm long.

Growing on shallow soil on large granite rocks; locally common north of Mbabane.