NEW COMBINATIONS IN *ANTIMIMA* AND *OCTOPOMA* (RUSCHIOIDEAE)

1. A new combination in *Antimima* for *Ruschia paripetala* (L.Bolus) L.Bolus

Antimima is a large and still unrevised genus of ± 100 species (Dehn 1989; Hartmann 1998b). Many species, most of which were described by L.Bolus, were not compared with similar species, making it unclear to which species they were most similar.

Features by which species of *Antimima* may be recognized include 5(or 6)-locular fruits with large closing bodies and shallow locules, heterophyllous leaves, and 1(–3)-flowered inflorescences (rarely aggregated in well-developed cymes) (Dehn 1989; Hartmann 1998b). In addition, the leaves in species of *Antimima* often have a papillate epidermal surface, whereas they are typically smooth in *Ruschia*. Notably, 6-locular fruits are rare in both *Ruschia* and *Antimima*.

A six-locular species of *Ruschia* from Namaqualand, *R. hexamera* L.Bolus, was recently found to be conspecific with *Antimima crassifolia* (L.Bolus) H.E.K.Hartmann and to represent the earlier name for the taxon (Klak 2010). A further collection by Pillans from Wallekraal near Hondeklip Bay in Namaqualand, described as *R. paripetala* by L.Bolus in 1927, is also very similar to *A. hexamera* (L.Bolus) Klak. The type specimens of both *A. hexamera* and *R. paripetala* pos-

sess six-locular fruits with closing bodies and both lack valve wings; the epidermis of the leaves is papillate; the inflorescence is 1–3-flowered; and the petaloid and filamentous staminodes are pink to white. In addition, L. Bolus described a further collection by Pillans, collected between Sendelings Drift and Doornpoort, as *R. paripetala* var. *occultans* L.Bolus (1929: 125). This variety was considered a synonym of *A. perforata* (L.Bolus) H.E.K.Hartmann (Hartmann 1998b). Both var. *occultans* and *A. perforata* have six-locular fruits and a somewhat similar habit, but differ from *R. paripetala* and *A. hexamera* by having smaller flowers, up to 14 mm diam. in *A. perforata* and var. *occultans*, compared to 27 mm diam. in *R. paripetala* and *A. hexamera*. Hartmann (2001) described the closing body of *R. paripetala* as small (as opposed to large in *A. perforata*), which is generally a characteristic of species of *Ruschia*. The somewhat smaller than usual closing body in *R. paripetala* may have been the main reason for retaining *R. paripetala* in *Ruschia.* However, a reinvestigation of the closing bodies in the types of *R. paripetala*, *R. paripetala* var. *occultans*, *A. hexamera* and *A. perforata* found that in none of them were the bodies sufficiently large to block the entire exit of the locule. The somewhat smaller size of the closing bodies in *A. crassifolia* and *A. hexamera* was previously discussed by Klak (2010). In other characteristics, such as the presence of expanding keels which extend into awns, the shallow locules, the papillate epidermis and the overall similar habit, the type specimens are in agreement. The morphological evidence thus suggests that *R. paripetala* is best placed in *Antimima*, where it is the earliest available name for this group of taxa. The new combination and full synonymy is given below.

The most northerly collection of this species was made in the Richtersveld and collections have been made as far south as Hondeklip Bay in Namaqualand.

Antimima paripetala *(L.Bolus) Klak*, comb. nov. *Mesembryanthemum paripetalum* L.Bolus, Annals of the Bolus Herbarium 4: 87 (1927). *Ruschia paripetala* (L.Bolus) L.Bolus: 221 (1950). Type: South Africa, [Northern Cape], from the coast at Hondeklip Bay, Oct. 1924, *Pillans 17759* (BOL, sheet I, lecto.!, here designated).

R. hexamera L.Bolus: 144 (1928). *Antimima hexamera* (L.Bolus) Klak: 307 (2010). Type: South Africa, [Northern Cape], hills near Brakfontein, between Sept. and Oct. 1926, *Pillans 5703* (BOL, holo.!).

R. hexamera L.Bolus var. *longipetala* L.Bolus: 237 (1931), syn. nov. Type: South Africa, [Northern Cape], Port Nolloth, without date, *M. Schlechter sub SUG8367* (BOL, holo.!).

R. crassifolia L.Bolus: 338 (1958), syn. nov. *Antimima crassifolia* (L.Bolus) H.E.K.Hartmann: 71 (1998b). Type: South Africa, [Northern Cape], Lekkersing, June 1954, *H.Hall sub BOL25758* (BOL, holo.!).

Additional material examined

NORTHERN CAPE.—2816 (Oranjemund): Alexander Bay, along road from Port Nolloth to Lekkersing, (–BD), 3 Sept. 2001, *Klak 776* (BOL); Boegoeberg Suid, (–DC), 26 Oct. 1985, *Van Jaarsveld 8229* (NBG). 2916 (Port Nolloth): between Port Nolloth and Holgat, (–BB), May 1929, *Pillans 5766* (BOL). 2917 (Springbok): Vioolsdrif, between Port Nolloth and Lekkersing, (–AA), 4 Sep. 2001, *Klak 780* (BOL); Karrachab Poort, (–AA), 18 July 1970, *Wisura 1625* (NBG).

2. A new combination in *Octopoma* for *Ruschia nana* L.Bolus

Octopoma is a genus of nine species, which can be subdivided into two groups, one occurring in Namaqualand and the other in the Little Karoo (Klak 2010). The main characteristics of *Octopoma*, which distinguish it from *Ruschia* and *Leipoldtia*, are the 6- to 8-locular fruits, with no or only narrow valve wings (Hartmann 1998a). In *Ruschi*a, the fruits are 5(rarely 6)-locular, with no valve wings or rarely with narrow valve wings, whereas in *Leipoldtia* the fruits are ± 10-locular with broad valve wings. Recently, a new species, *Octopoma tanquanum* Klak, was described. This is found in the Tanqua and Little Karoo and differs from the other species of *Octopoma* by its 6-locular fruits and broad valve wings (Klak 2010).

Examination of herbarium specimens currently placed in *Ruschia* indicates that the little-known species, *R. nana* L.Bolus, is conspecific with *O. tanquanum*. The type of *R. nana* was collected at Matjiesfontein by H. Bolus in September 1908. Unfortunately, this specimen lacks fruits, so that the internal morphology of its capsule remains uncertain. However, the presence of six calyx lobes and six styles indicate that the fruits would be 6-locular. The presence of six-locular fruits is very rare in *Ruschia* and is an indication that the species may not belong in *Ruschia*. A comparison of the type of *R. nana* with the type of *O. tanquanum* shows that both have extremely similar leaves, which are trigonous, fused towards the bases and finely serrated along the keel towards the apex. Also, both type collections have solitary, cream-coloured flowers and bracteoles which embrace the base of the flower. Both *O. tanquanum* and *R. nana* flower in late spring to early summer (end of October to November and December respectively). Since both type collections are from the Matjiesfontein area, there is little doubt that the two species are conspecific. The absence of mature fruits on the type of *R. nana* could have been one reason why this species was not previously transferred to *Octopoma* (Hartmann 1998a). The following new combination and synonym are provided.

Octopoma nanum *(L.Bolus) Klak*, comb. nov. *Ruschia nana* L.Bolus, Notes on Mesembryanthemum and allied genera 2: 75 (1929). *Mesembryanthemum reductum* N.E.Br.: 32 non 33 (1930). Type: South Africa, [Western Cape], Matjiesfontein, Sept. 1908, fl. Cape Town in Dec. 1908, *H.Bolus 13417* (BOL, holo.!).

O. tanquanum Klak: 302 (2010), syn. nov. Type: South Africa, Western Cape, Tanqua Karoo, 7 km west of Matjiesfontein, Farm Aasvoëlbos, 26 May 2007, *Bruyns 10797* (BOL, holo.!).

Additional specimens examined

NORTHERN CAPE.—3220 (Sutherland): between Hottentots Kloof and Sutherland, (–CC), *Leipoldt s.n.* (BOL).

WESTERN CAPE.—3319 (Worcester): Karoopoort, (–BA), *Littlewood sub KG534/59* (BOL); east of Karoopoort, (–BB), 17 Aug. 2002, *Bruyns 9158* (BOL); 5.5 miles [8.8 km] from Touws River on Worcester road (–BD), *Acocks 15289* (BOL). 3320 (Montagu): Touws River Dist., Tanqua Karoo, Melkboskraal Farm, (–AA), 12 Sept. 2006, *Klak 1373*, (BOL); 7 km west of Matjiesfontein, Aasvoëlbos Farm, (–BA), 28 May 2007, *Klak 1441* (BOL); Matjiesfontein, (–BA), *Pillans 2057* (BOL); Ceres Karoo, *Herre SUG10508* (BOL); Bloutoring station, (–CB), 22 June 2009, *Bruyns 11381* (BOL); Sewefontein Farm, (–DA), *Bruyns 11389* (BOL); Tilney Farm, (–DC), 26 May 2002, *Bruyns 9025* (BOL).

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