

A New Species of the Genus *Hermas* (Apiaceae) from South Africa

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ABSTRACT. A new species of the Cape endemic genus *Hermas* L. is described. *Hermas proterantha* B. J. de Villiers is a very distinct new species endemic to Piquetberg Mountain in Western Cape province. It is the only deciduous *Hermas* species and has thinly textured, deeply lobed (pinnatipartite) leaves that wither in summer.

Key words: Apiaceae, Azorelloideae, Cape flora, *Hermas*, IUCN Red List.

The genus *Hermas* L. is a group of andromonoecious dwarf shrublets, endemic to the fynbos regions of the Western and Eastern Cape provinces of South Africa. The genus was placed in the subfamily Hydrocotyloideae by Drude (1897–98), while more recently Plunkett et al. (2004) proposed a change of rank to the subfamily Azorelloideae. This subfamily includes all genera with woody endocarps and laterally or dorsally compressed fruit. Liu (2004) tentatively placed the genus in the *Bolax* Commerson ex Jussieu group, because all previously known *Hermas* species share with this group fruit with prominent lateral wings.

The new species, *Hermas proterantha* B. J. de Villiers, has most of the characters associated with the genus but lacks lateral wings in the fruit and has very deeply lobed deciduous leaves. In Table 1, the morphological characters of *H. proterantha* are compared to those of *H. capitata* L. f., *H. quercifolia* Ecklon & Zeyher, and *H. villosa* (L.) Thunberg, showing the unique combination of characters of the new species.

Hermas proterantha B. J. de Villiers, sp. nov.

TYPE: South Africa. Western Cape: Picketberg [Piquetberg], Zebra Kop, 32°45'S, 18°45'E, 16 Dec. 1979, E. Esterhuysen 35322 (holotype, BOL). Figure 1.

Hermas proterantha B. J. de Villiers, species distincta *H. capitata* L. f. aliquantum similis forma foliorum umbelloque parvo paucifloro, sed ab hac et speciebus omnibus aliis foliis deciduis pinnatipartitis (in speciebus aliis integra vel dentata), et in fructu absentia tota costarum vel alarum dorsalium differt.

Perennial dwarf shrublet, ca. 90 mm high (or up to 440 mm, including inflorescence). *Stem* short, cov-

Table 1. Comparison of *Hermas proterantha* with selected other species of *Hermas*.

Character	<i>H. proterantha</i>	<i>H. capitata</i>	<i>H. quercifolia</i>	<i>H. villosa</i>
Plant height (excluding inflorescence) (mm)	90	30–170	70	150–600
Petiole length (mm)	30–110	5–62	(7–)12(–22)	8–15
Lamina shape	ovate-elliptic	ovate-elliptic to cordate	obovate to ovate-elliptic	broadly lanceolate to elliptic
Leaf dimensions (mm)	(20–)40(–35) × 15–25(–52)	8–20 × 3–14	30–60 × 16–22	20–150 × 20–62
Leaf base	variably cuneate to cordate	variably cuneate to cordate	cuneate	variably cordate to subcordate
Leaf apex	mucronulate	acute to obtuse	acute	acute to apiculate
Leaf margin	pinnatipartite, the lobes dentate	slightly dentate	dentate	entire, repand and serrate
Vestiture of adaxial leaf surface	glabrous	glabrous to glabrescent	densely tomentose	glabrous
Peduncle length (mm)	300(–350)	20–340	(265–)430(–560)	240–600
No. of umbellules	5 to 12	3 to 12	7 to 28	46 to 100
Fruit shape	ovate	round to ovate	ovate	ovate
Median rib	absent	prominent	prominent becoming winged in the lower third	prominent becoming winged in the lower third
Lateral wings	absent	present	present	present

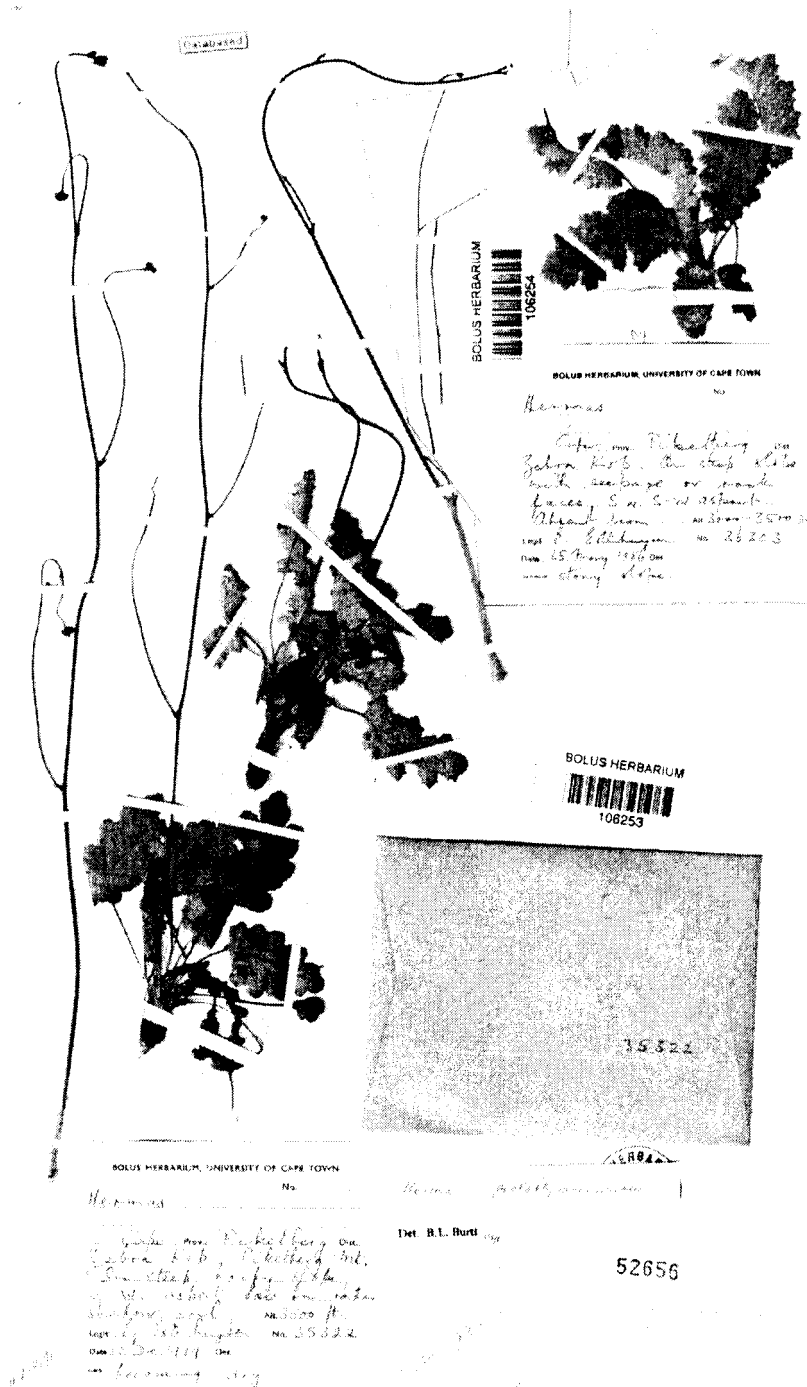
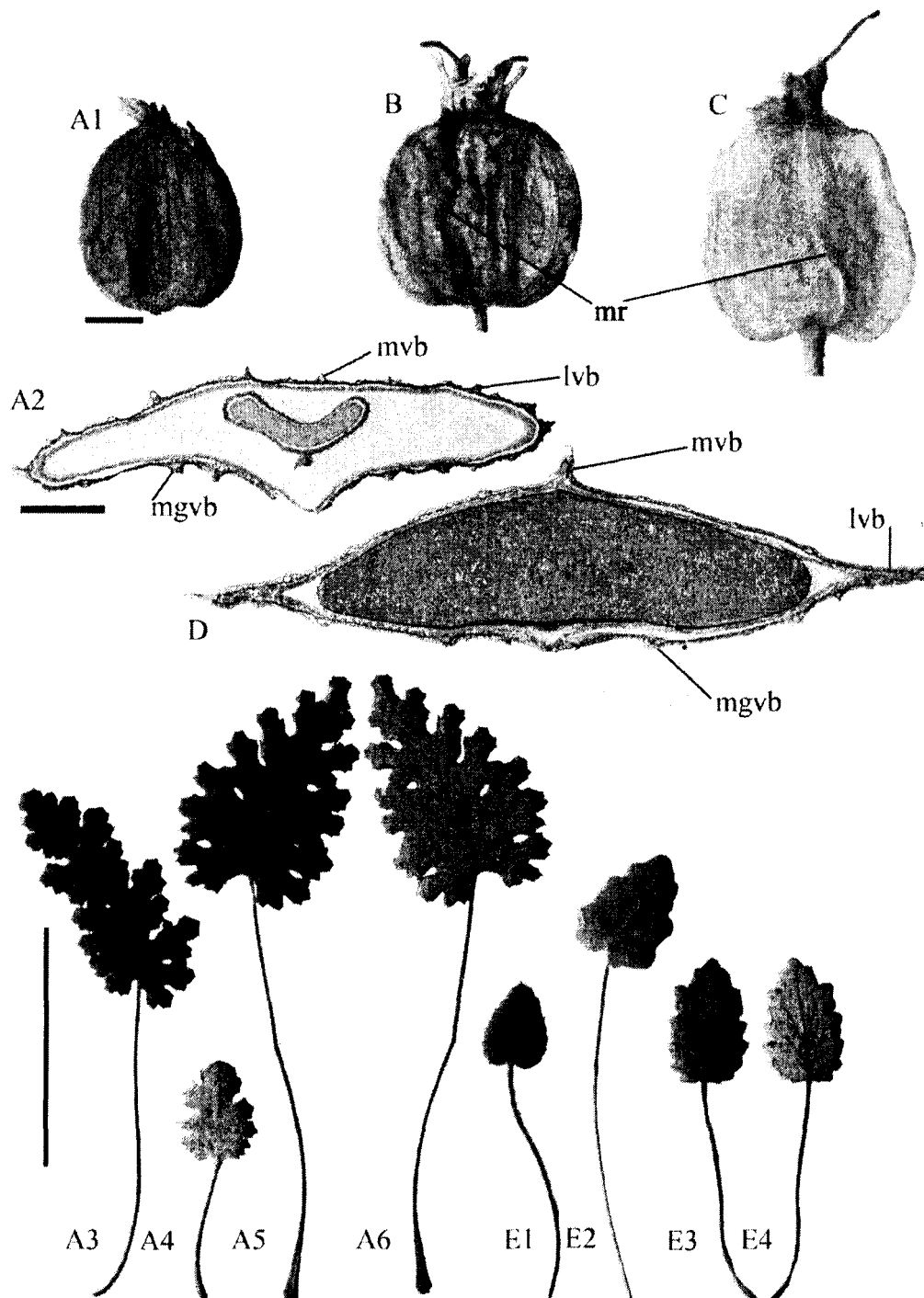


Figure 1. Holotype of *Hermas proterantha* B. J. de Villiers in BOL.

Figure 2. A comparison of the fruit and leaves of *Hermas proterantha* (A1–A6) with *H. villosa* (B), *H. quercifolia* (C), *H. quinqueidentata* (D), and *H. capitata* (E). —A1. Fruit of *H. proterantha* (Zinn 1940, NBC) showing the absence of any vascular ridges on the dorsal side of the fruit. —B. Fruit of *H. quercifolia* (Viviers 959, NBC) illustrating the prominent median rib (mr = median rib). —C. Fruit of *H. villosa* (MacOwan 128, PRE) showing the prominent median rib that becomes winged in the



lower third. —A2. Transverse section of *H. proterantha* fruit (Zinn 1940, NBC) illustrating the absence of lateral wings (lvb = lateral vascular bundle, mvb = median vascular bundle, mgvb = marginal vascular bundle). —D. Transverse section of *H. quinquedentata* fruit (Bolus 127, PRE) indicating the presence of vascular bundles in the lateral wings. —A3–A6. Leaves of *H. proterantha* (A3, A5, A6: Esterhuysen 35492, BOL; A4: Esterhuysen 36303, BOL) displaying variation in leaf shape (A5 and A6 show adaxial and abaxial surfaces of the same leaf). —E1–E4. Leaves of *H. capitata* (E1: Compton 8306, NBC; E2: Esterhuysen 4731, BOL; E3, E4: Andreae 1094, NBC) illustrating variation in leaf shape (E3 and E4 show adaxial and abaxial surfaces of the same leaf). Scale bars: A1, B, C = 1 mm; A2, D = 0.2 mm; A3–A6, E1–E4 = 50 mm.

ered with remains of petioles. *Leaves* simple, on slender petioles, in basal clusters, proteranthous; petiole 30–110 mm, glabrescent; lamina ovate-elliptic, pinnatipartite (rarely pinnatifid), (20–)40–(35) × 15–25(–52) mm; base variably cuneate to cordate; apex mucronulate; margin cleft, the lobes dentate; adaxial surface green, glabrous; abaxial surface gray-white, densely tomentose; veins prominent, reticulate. *Inflorescence* with 1 to 4 umbels; peduncle slender, 300(–350) mm, densely woolly at the base; bracts on peduncle lanceolate, ca. 3 × 1 mm, revolute; umbel small, each with 5 to 12 umbellules; umbellule with 1(to 2) bisexual flowers surrounded by (3 to)6 male flowers; bracteoles paired; sepals large, petaloid, veins single in keel; petals filiform. *Fruit* ovate, dorsally strongly compressed, ca. 4 × 3 mm; lateral wings absent, marginal ribs inconspicuous, dorsal ribs inconspicuous or absent, endocarp woody.

Distribution, phenology, and etymology. The species is endemic to the Piquetberg, an isolated mountain about 105 km directly north of Cape Town. Flowering occurs from December to February and fruiting from February to April. This is the only species with deciduous leaves that wither during the dry summer months. The leaves appear long before flowering, hence the specific epithet.

IUCN Red List category. Due to the lack of information regarding the ecology, life history, and population density of the species, as well as the frequency of fire in Piquetberg Mountain, *Hermas proterantha* should be classified as DD (Data Deficient) according to IUCN criteria (IUCN, 2001).

Relationships. *Hermas proterantha* is a poorly known species represented by only four herbarium collections (on five sheets in BOL and NBG). The species is not mentioned in any of the available taxonomic literature treatments of *Hermas* (Sonder, 1862; Burt, 1991; Goldblatt & Manning, 2000). The deeply lobed (pinnatipartite) leaves are thinly textured and quite distinct (Fig. 2A3–A6, E1–E4) when compared to those of the superficially similar *H. capitata*, where the leaves are shallowly lobed and firmly textured. In all other *Hermas* species, the leaves are persistent, but in *H. proterantha* they shrivel and die when the flowers appear in summer. The fruit of *H. proterantha* lack the prominent median ridge

(Fig. 2A1) that is present (and sometimes partly winged) in all other species (Fig. 2B, C). The two mericarps shown in Figure 2 (A2 and D) are superficially similar in shape but differ in that the lateral ribs are winged in *H. quinquedentata* L. f. (and in all other species of *Hermas*), while wings are absent in the new species. Furthermore, small ribs are present between the lateral and marginal vascular bundles and represent the outer (lateral) boundary of a mericarp (Fig. 2A2).

Paratypes. SOUTH AFRICA. **Western Cape:** Piquetberg, Levant Kop, 32°42'S, 18°44'E, 13 Sep. 1980 (leaves), *E. Esterhuysen 35492* (BOL); Piquetberg, Kapiteins Kloof [Captain's Kloof], 32°46'S, 18°34'E, 22 Oct. 1935 (leaves), *N. S. Pillans 7856* (BOL); Piquetberg, Zebra Kop, 32°45'S, 18°45'E, 25 May 1986 (leaves), *E. Esterhuysen 36303* (BOL), Feb. 1940 (flowers), *H. Zinn 1940* (NBG).

Acknowledgments. The authors thank the curators and staff of the cited herbaria (BOL, PRE, and NBG) for making material available for study. Funding from the National Research Foundation is gratefully acknowledged. Hugh Glen (from NH) is thanked for the Latin translation and Lize Agenbag (South African National Biodiversity Institute) for help with the Red List assessment.

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