

CASSELIA MANSOI Schau.

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 86. 1858; Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 196--197. 1975.

CASSELIA ROSULARIS Sandw.

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 197. 1975.

Additional citations: BRAZIL: Mato Grosso: Archer & Gehrt 152 [Herb. Nat. Arb. 177226] (W--2666047).

CASSELIA SERRATA Nees & Mart.

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 86. 1858; Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 193 & 197--198. 1975.

The Glaziou 13060 [Macbride photos 24626 in part], cited by me in a previous installment of these notes and commented on there, seems to me now to depict a specimen of typical C. glaziovii (Briq. & Moldenke) Moldenke and one of C. glaziovii var. serrata Moldenke rather than of C. serrata.

CASSELIA VERONICAEFOLIA Cham.

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 86. 1858; Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 198. 1975.

Pinheiro describes this species as a plant 50 cm. tall, the corollas "white", and found it in anthesis in April.

Additional citations: BRAZIL: Bahia: Pinheiro 1221 (Z).

CASSELIA ZELOTA (Moldenke) Moldenke

Additional bibliography: Hocking, Excerpt. Bot. A.26: 7. 1975; Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 198. 1975.

ADDITIONAL NOTES ON THE GENUS CHASCANUM. VIII

Harold N. Moldenke

CHASCANUM E. Mey.

Additional synonymy: Denisea [Neck.] apud López-Palacios, Fl. Venez. Verb. 648, in syn. 1977.

Additional & emended bibliography: Spach, Hist. Nat. Veg. Phan. 9: 227. 1840; Schau. in A. DC., Prodr. 11: 521 & 557--560. 1847; Buek, Gen. Spec. Syn. Candoll. 3: 64 & 343. 1858; Hepper in Hutchins. & Dalz., Fl. W. Trop. Afr., ed. 2, 2: 432 & 437--438. 1963; El-Gazzar, Egypt. Journ. Bot. 17: 75 & 78. 1974; Ament, Journ. E. Afr. Nat. Hist. Soc. & Nat. Mus. 154: 25. 1975; Hocking,

Excerpt. Bot. A.26: 7. 1975; Kooiman, Act. Bot. Neerl. 24: [459]. 1975; Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 31: 122--127, 234--238, 394, & 396 (1975) and 34: 261, 262, 272, & 501. 1976; Follmann-Schrag, Excerpt. Bot. A.26: 505. 1976; Hocking, Excerpt. Bot. A.28: 257. 1976; López-Palacios, Fl. Venez. Verb. 205, 648, & 652. 1977; Moldenke, Phytologia 40: 414 & 415. 1978; A. L. Moldenke, Phytologia 40: 361. 1978.

López-Palacios (1977) erroneously includes the genera Pleurostigma Hochst. and Plexipus Raf. in the synonymy of Bouchea Cham., but actually they belong in that of Chascanum.

CHASCANUM ADENOSTACHYUM (Schau.) Moldenke

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 64. 1858; Hocking, Excerpt. Bot. A.26: 7. 1975; Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 31: 122. 1975; Hocking, Excerpt. Bot. A.28: 257. 1976.

This species has been collected in fruit in January.

Additional citations: SOUTH AFRICA: Transvaal: Kinges 166 (Mu, Mu); Stopp M.65 (Mu).

CHASCANUM ANGOLENSE Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 201. 1975.

Additional citations: ANGOLA: Benguela: Gossweiler 3612 [Mo. Bot. Gard. photos A.877] (W--photo of type).

CHASCANUM ARABICUM Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 201--202. 1975.

CHASCANUM CAESPITOSUM (H. H. W. Pearson) Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 202. 1975.

CHASCANUM CERNUUM (L.) E. Mey.

Additional synonymy: Chascanum cerneum (L.) E. Mey. ex Moldenke, Phytologia 34: 272, in syn. 1976.

Additional bibliography: Schau. in A. DC., Prodr. 11: 559. 1847; Buek, Gen. Spec. Syn. Candoll. 3: 64. 1858; El-Gazzar, Egypt. Journ. Bot. 17: 75 & 78. 1974; Kooiman, Act. Bot. Neerl. 24: [459]. 1975; Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 31: 122--123 & 394 (1975) and 34: 272. 1976.

Recent collectors describe this species as an occasional decumbent bush, the leaves bright-green or dark-green and glossy, fleshy, and the corollas as white, and have found it growing at altitudes of 50 to 1200 feet, flowering in June and fruiting in September. Acocks refers to it as "rare on hard sandy flats".

Additional citations: SOUTH AFRICA: Cape Province: Acocks 21119 (Mu), 21555 (Mu); B. E. Martin 358 (Mu); Zeyher 3548 (Mu).

CHASCANUM DEHISCENS (L. f.) Moldenke

Additional synonymy: Chascanum dihiscens Moldenke, Biol. Abstr. 60: 68, sphalm. 1975.

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 64 & 343. 1858; Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 31: 123 & 396 (1975), 34: 272 (1976), and 40: 415. 1978.

Recent collectors describe this plant as a "shrublet, 1 foot tall", with dark-green leaves, and have found it growing "in grassveld toward larroid scrub in ravines" and "mixed in Euphorbia tirucalli scrub". The corollas are said to have been "white" when fresh on Bayliss BS.7285.

Material of this species has been misidentified in some herbaria as Bouchea sp. and as Chascanum hederaceum (Sond.) Moldenke.

Additional citations: SOUTH AFRICA: Cape Province: Bayliss BS. 7285 (Mu, N); Dyer 2154 (Mu); Stopp M.62 (Mu). Natal: D. Edwards 2778 (Mu).

CHASCANUM GARIPENSE E. Mey.

Additional synonymy: Chascanum gariepense E. Mey. ex Moldenke, Phytologia 34: 272, in syn. 1976.

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 64. 1858; Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 31: 123 (1975) and 34: 272. 1976.

Recent collectors refer to this plant as a "widely branched annual, 2 feet tall" or a perennial suffrutescent herb, woody shrublet, or strongly woody shrub, with "brown-green" aspect, erect, 36 cm. to 1.3 m. tall, of globular habit, the tubular flowers borne in terminal spikes. They have encountered it on rocky cliffs, among granite boulders, and in sandy semi-deserts, in ironstone boulder koppies, and in sand among stones on riverbanks, at altitudes of 1000—1500 meters, flowering and fruiting from December to June and August to October. Winder found it to be common in dry watercourses; Leistner refers to it as "locally common in sandy leegte flats of ironstone gravel" and "locally common in gullies in banded jasper hills", but Giess says "Nur im ubteren Teil der Berge vorkommend". Rodin reports that it is "one of the few flowering plants north of Marienthal".

The corollas are mostly described as "white" (as on Compton 24453, Giess 2366, Ihlenfeldt 1781, Kinges 2181, Leistner 1345 & 2350, Merxmüller & Giess 1647 & 2225, Nordenstam 3891, Rodin 8958, Schlieben 8860, Van Bred 1372, and Winter 3172 & 3413), but they are referred to as "pure-white" on Giess, Volk, & Bleissner 5225 and Merxmüller & Giess 28165, "pure-white but lilac when withering" on Giess 3031, "white with yellow throat" on Nordenstam 2158, "lilac" on Giess & Vuuren 777, "very light-lilac" on Merxmüller & Giess 2823, "purplish" on H. Hall 576, and "blue" on Goldblatt 1863.

Kinges refers to the species as "abundant", while Giess, Volk, & Bleissner describe it as "very abundant".

Additional citations: NAMIBIA: Giess 2366 (Mu), 3031 (Mu); Giess,

Volk, & Bleissner 5225 (Mu); Giess & Vuuren 777 (Mu); Goldblatt 1863 (Mu); Ihlenfeldt 1781 (Mu); Kinges 2181 (Mu), 2315 (Mu), 3341 (Mu), 4772 (Mu); Kraüsel 683 (Mu), 840 (Mu); Merxmüller & Giess 1647 (Mu, Mu), 2225 (Mu), 2823 (Mu), 28165 (Mu); U. Meyer 25 (Mu); Nordenstam 2158 (Mu), 3891 (Mu); Rodin 8958 (Mu); Rusch s.n. [Walter & Walter 4578] (Mu); Seydel 36 (Mu), 2005 (Mu); Volk 52 (Mu), 12146 (Mu), 12715a (Mu); Walter & Walter 1296 (Mu); Winter 3172 (Mu), 3413 (Mu); Wiss 1477 (Mu). SOUTH AFRICA: Cape Province: Compton 24453 (Mu); H. Hall 576 (Mu); Leistner 1345 (Mu), 2350 (Mu); Schlieben 8860 (Mu); Van Bred 1372 (Mu).

CHASCANUM GILLETII Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 202 & 204—205 (1975) and 31: 237 & 238. 1975.

CHASCANUM GÜRKEANUM (Loes.) Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 205 (1975) and 31: 236. 1975.

CHASCANUM HANNINGTONII (Oliv.) Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 205. 1975.

CHASCANUM HEDERACEUM (Sond.) Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 31: 123, 124, & 396. 1975.

Recent collectors have encountered this plant in grasslands and, according to Leistner, "locally frequent in loamy soil on dolomite outcrops".

The Schlieben 7661, 9368, and 9393, distributed as typical C. hederaceum, are actually var. natalese (H. H. W. Pearson) Moldenke, while D. Edwards 2778 is C. dehiscens (L. f.) Moldenke.

Additional citations: SOUTH AFRICA: Cape Province: Leistner 2284 (Mu); Merxmüller 208 (Mu). Transvaal: Junod 726 (Mu).

CHASCANUM HEDERACEUM var. NATALENSE (H. H. W. Pearson) Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 206 & 396. 1975.

Recent collectors describe this plant as a perennial, 30—40 cm. tall, with white flowers, and have found it "abundant" at 1400 meters altitude, flowering and fruiting in February.

Additional citations: SOUTH AFRICA: Transvaal: Merxmüller 521 (Mu); Schlieben 7661 (Mu), 9368 (Mu), 9393 (Mu).

CHASCANUM HILDEBRANDTII (Vatke) Gillett

Additional bibliography: Ament, Journ. E. Afr. Nat. Hist. Soc. & Nat. Mus. 154: 25. 1975; Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 205 & 207—208 (1975) and 31: 237 & 238. 1975.

Recent collectors describe this species as a perennial herb, 30—

50 cm. tall, with numerous stems from a woody rootstock, "the stems and roots grind bright gray", the flowers borne in dense spikes terminating the stems, only a few blooming at a time. They have encountered it "in Acacia bushland on quartz bubble debris" and "locally common amongst lava boulders on a red sandy loam with Cyperus obtusiflorus, Barleria, Endostemon, and Indigofera spinosa in open Acacia tortilis ssp. spirocarpa-Cordia ovalis-Commiphora bushland", at altitudes of 1220--1550 meters, flowering and fruiting in February, March, and October.

Richards describes the plant as having "ridged" hairy stems and encountered it as scattered bushes in long grass on red gritty clay soil at 4300 feet altitude. The corollas are said to have been "white" on Greenway & Napper 13569, Leippert 5059 & 6408, and M. Richards 25278. Ament (1975) refers to it as a "common herb, 0.5 m. tall", citing Gillett 17017 and Ament 573 from Kenya.

Additional citations: TANZANIA: Tanganyika: Leippert 6408 (Mu); M. Richards 25278 (Mu). KENYA: Greenway & Napper 13569 (Mu); Hildebrandt 2737 (Mu--1537--type); Leippert 5059 (Mu).

CHASCANUM HUMBERTI Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 208. 1975.

CHASCANUM INCISUM (H. H. W. Pearson) Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 31: 123, 236, & 394 (1975) and 34: 261 & 262. 1976.

Winter & Leistner refer to this plant as a small perennial herb with aromatic leaves and found it growing in brown loam with granite boulders and quartz pebbles, flowering and fruiting in April. Zeyher 1373 is a mixture with Lantana rugosa Thunb.

Additional citations: NAMIBIA: Seydel 24 (Mu), s.n. (Mu); Winter & Leistner 5511 (Mu). SOUTH AFRICA: Cape Province: Zeyher 1373 in part (Mu).

CHASCANUM INCISUM var. CANESCENS Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 208 (1975) and 31: 236. 1975.

Recent collectors describe this plant as a subshrub, very woody at the base, 30 cm. tall, and have found it flowering and fruiting in February and June.

Material of this taxon has been misidentified and distributed in some herbaria as C. pinnatifidum (L. f.) E. Mey.

Additional citations: NAMIBIA: Giess 3718 (Mu); Merxmüller 1767 (Mu).

CHASCANUM INSULARE Moldenke

Additional bibliography: Hocking, Excerpt. Bot. A.26: 7. 1975; Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 208. 1975.

CHASCANUM INSULARE var. **CANESCENS** Moldenke

Additional bibliography: Moldenke, Biol. Abstr. 60: 68. 1975;
Moldenke, Phytologia 30: 208. 1975.

CHASCANUM INSULARE var. **HUMBERTI** Moldenke

Additional bibliography: Hocking, Excerpt. Bot. A.26: 7. 1975;
Moldenke, Biol. Abstr. 60: 68. 1975; Moldenke, Phytologia 30: 208.
1975.

CHASCANUM KROOKII (Gürke) Moldenke

Additional bibliography: Moldenke, Phytologia 31: 123. 1975.

The corollas are said to have been "white" on Rudatis 1868 and
this collector encountered the plant at 800 meters altitude, flow-
ering in January.

Additional citations: SOUTH AFRICA: Natal: Rudatis 1868 (Mu—
8296).

CHASCANUM LATIFOLIUM (Harv.) Moldenke

Additional bibliography: Moldenke, Phytologia 31: 123--124.
1975.

The Devenish 937 and Mauve 4408, distributed as C. latifolium,
actually represent var. transvaalense Moldenke.

CHASCANUM LATIFOLIUM var. **TRANSVAALENSE** Moldenke

Additional bibliography: Moldenke, Phytologia 31: 124. 1975.

Recent collectors describe this plant as shrubby, 15--24 inches
tall, growing from a woody rootstock, tending to form colonies.
The corollas are said to have been "white to pale-mauve" on Deven-
ish 937 and "varying from dark-mauve to white" on Mauve 4408.

Material of this variety has been distributed in some herbaria
as typical C. latifolium (Harv.) Moldenke.

Additional citations: SOUTH AFRICA: Transvaal: Devenish 937
(Mu); Mauve 4408 (Mu).

CHASCANUM LIGNOSUM (Dinter) Moldenke

Additional bibliography: Moldenke, Phytologia 31: 124 & 236.
1975.

Additional citations: NAMIBIA: Dinter 5120 (Mu--isotype).

CHASCANUM MARRUBIIFOLIUM Fenzl

Additional bibliography: Buek, Gen. Spec. Syn. Candoll. 3: 64.
1858; Moldenke, Phytologia 31: 124--127. 1975.

Gillett & Newbould refer to this plant as "occasional on river-
banks with Zizyphus, Terminalia, Cordia gharaf and remnant Hyphae-
ne, sand bank by river", flowering and fruiting in June. The cor-
ollas are said to have been "white" on Gillett & Newbould 19186.

Additional citations: KENYA: Gillett & Newbould 19186 (Mu).

CHASCANUM NAMAQUANUM (H. Bolus) Moldenke

Additional bibliography: Moldenke, *Phytologia* 31: 127 & 236. 1975; Hocking, *Excerpt. Bot. A.* 28: 257. 1976.

Goldblatt describes the leaves of this plant as gray and the corollas as "cream". He encountered the plant on granite, flowering in August.

Additional citations: SOUTH AFRICA: Cape Province: Goldblatt 2371a (Mu, Z).

CHASCANUM PINNATIFIDUM (L. f.) E. Mey.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 64. 1858; Moldenke, *Phytologia* 31: 234--236. 1975; Hocking, *Excerpt. Bot. A.* 28: 257. 1976.

Recent collectors describe this species as a "biennial" or perennial, spreading or spreading-ascending herb, woody at the base, or as a woody shrublet, 15--30 cm. tall, and have found it growing in sand or in sand mixed with lime on flats and low "rantjies" at the foot of mountains in gravelly granite soils, flowering from October to May and in August, fruiting in January, April, May, and December, at altitudes of 1200--1500 meters. Seydel refers to it as "not common" in rocky soil in Namibia, while Therser calls it "frequent between rocks" in the Cape Province. Giess describes it as a "kugeliges, am Grunde leicht verholztes Kraut bis 20 cm hoch und 30 cm Durchmesser". The corollas are said to have been "white" on Giess 61, 130, & 13668, Merxmüller & Giess 28024, and Therser 1860 and "cream" on Tölken & Hardy 955 and Winter 2677.

The Seydel 24 & s.n. and Winter & Leistner 5511, distributed as C. pinnatifidum, are actually C. incisum (H. H. W. Pearson) Moldenke, while Giess 3718 and Merxmüller 1767 are C. incisum var. canescens Moldenke.

Additional citations: NAMIBIA: Giess 51 (Mu), 130 (Mu), 13668 (Mu); Giess & Müller 13979 (Mu); Kinges 4602 (Mu), 4774 (Mu); Merxmüller 945 (Mu); Merxmüller & Giess 28024 (Mu); Rehm s.n. [12. 10.39] (Mu); Seydel 2524 (Mu), 2596 (Mu); Tölken & Hardy 955 (Mu); Volk 174 (Mu), 12226 (Mu), 12626 (Mu), 12633 (Mu); Walter & Walter 1/309 (Mu), 2/35 (Mu); Winter 2677 (Mu), 3318 (Mu). SOUTH AFRICA: Cape Province: Marloth 985 (Mu--3838); Merxmüller & Giess 693 (Mu); Schlieben 8713 (Mu); Therser 1860 (Mu). Transvaal: Stopp M.64 (Mu).

CHASCANUM PUMILUM E. Mey.

Additional bibliography: Buek, *Gen. Spec. Syn. Candoll.* 3: 64. 1858; Moldenke, *Phytologia* 31: 235--236. 1975.

Recent collectors describe this plant as a low perennial herb, "herbaceous from a perennial rootstock", or as a rounded bush or low shrublet, 25--50 cm. tall, 45 cm. in diameter, gray-green, the flowers long-tubed, and have encountered it on low pale-red sand dunes, on low sandy flats, and in grassland with low bushes, at altitudes of 3000--4200 feet, flowering from December to March and in May and September, fruiting in February. Leistner refers to it as "occasional", "rare", or "locally common" in South Afri-

ca. The corollas are described as having been "white" on Leistner 1000, 2867, & 3153 and Wild 5044, as "cream-color" of Giess & al. 7001 and Merxmüller & Giess 741, and "white to cream" on Liebenberg 7062. Seydel found it growing "auf rotem Flächenboden nach etwas Regen".

Additional citations: NAMIBIA: Giess, Volk, & Bleissner 7001 (Mu); Merxmüller & Giess 741 (Mu), 1138 (Mu); Rehm s.n. [4.2.1940] (Mu); Seydel 3928 (Mu); Volk 11540 (Mu), 11542a (Mu); Walter & Walter 1315 (Mu). SOUTH AFRICA: Bechuanaland: Leistner 2089 (Mu); H. Wild 5044 (Mu). Cape Province: Leistner 1000 (Mu), 2867 (Mu), 3153 (Mu); Liebenberg 7062 (Mu).

CHASCANUM SCHLECHTERI (Gürke) Moldenke

Additional bibliography: Moldenke, *Phytologia* 31: 124 & 237. 1975.

Ward describes this plant as "common in sandy soil on north-facing slight slopes" at 800 feet altitude, the flowers white in November.

Additional citations: SWAZILAND: Kemp 538 (W--2781762). SOUTH AFRICA: Natal: C. J. Ward 3306 (Mu).

CHASCANUM SESSILIFOLIUM (Vatke) Moldenke

Additional bibliography: Moldenke, *Phytologia* 31: 237--238. 1975; Hocking, *Excerpt. Bot. A.28*: 257. 1976.

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ADDITIONAL NOTES ON THE GENUS CITHAREXYLUM. XII

Harold N. Moldenke

CITHAREXYLUM B. Juss.

Additional synonymy: Chytharexylum Sw. apud López-Palacios, *Bol. Soc. Venez. Cienc. Nat.* 31: 356, sphalm. 1975.

Additional & emended bibliography: L., *Gen. Pl.*, ed. 5, imp. 1, 273 & [506]. 1754; Jacq., *Enum. Syst. Pl. Carib.*, imp. 1, 26 & 39 (1760) and imp. 2, 26 & 39. 1762; Jacq., *Select. Stirp. Amer. Hist.*, imp. 1, 185--186, pl. 118. 1763; Sweet, *Hort. Brit.*, ed. 1, 1: 323 (1826) and ed. 2, 417. 1830; G. Don in Loud., *Hort. Brit.*, ed. 1, 248 (1830) and ed. 2, 248. 1832; Loud., *Hort. Brit.*, ed. 2, 551. 1832; Hook. & Arn., *Bot. Beech. Voy.* 306. 1838; G. Don in Loud., *Hort. Brit.*, ed. 3, 248. 1839; Sweet, *Hort. Brit.*, ed. 3, 551. 1839; Spach, *Hist. Nat. Vég.* 9: 227. 1840; Schau. in A. DC., *Prodr.* 11: 545, 609--614, 616, 628, & 697--698. 1847; Buek, *Gen. Spec. Syn. Candoll.* 3: 104--105 & 147. 1858; Coult., *Contrib. U. S. Nat. Herb.* 2: 326 & 329. 1892; Sessé & Moc., *Fl. Mex.*, ed. 2, 152. 1894; Engl., *Syllab. Pflanzenfam.*, ed. 2, 178 (1898), ed. 3, 187 (1903), ed. 5, 192 (1907), and ed. 6, 198. 1909; Gilg in



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