Revision of *Hermannia* subgenus *Hermannia* in southern Africa

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**ABSTRACT**

Observations on the genus as a whole are made and the subgenus *Hermannia* is defined. Species in southern Africa which fall in this subgenus are revised in detail. A key is provided to these 93 species and several line drawings illustrate some of the diagnostic features used in the key.

**INTRODUCTION**

This revision is a contribution towards a treatment of the genus *Hermannia* for the Flora of Southern Africa. The format followed is that formerly used for the F.S.A., which differs in several respects from that generally employed in Bothalia.

In the course of the work thousands of herbarium specimens, both in the National Herbarium, Pretoria, and on loan from overseas herbaria, such as Leningrad, Vienna, Stockholm and Zürich, were studied.

The genus, like so many others, presents great difficulties to the taxonomist in his attempt to define satisfactorily the sub-genera and some of the species. Intermediates, aberrants and putative hybrids abound. Specimens, both in the National Herbarium, Pretoria, and on loan from overseas herbaria, such as Leningrad, Vienna, Stockholm and Zürich, were studied.

The genus, like so many others, presents great difficulties to the taxonomist in his attempt to define satisfactorily the sub-genera and some of the species. Intermediates, aberrants and putative hybrids abound. Before *Mahernia* L. was put into synonymy under *Hermannia* L., Bentham & Hooker in their Genera Plantarum (1862), separated these genera on the shape of the filaments. Those of *Hermannia* were described as "oblong or dilated at the apex" and of *Mahernia* as "dilated in the middle", the latter termed "cruciform" by subsequent authors. In 1895 K. Schumann (Natür. Pfl.Fam. 3: 6: 80) placed *Mahernia* L. as section *Mahernia* in the genus *Hermannia* remarking that, since the main distinguishing feature, namely cruciform filaments, did not hold among species subsequently put in *Mahernia*, it could not be upheld as a genus. Later, in Engl., Monogr. Afr. Pfl. 5: 49 (1900), K. Schumann raised the section to subgeneric rank as subgenus *Mahernia* (L.) K. Schum. This has been supported in the present study, for not only has "cruciform" been variously interpreted but it occurs in groups that are not otherwise related.

Just as it has been found impracticable to separate these two genera, so the genus *Hermannia*, in the broad sense, is not readily grouped into subgenera. Exploring several features which might be diagnostic, such as inflated calyces, horned capsules, deeply divided leaves and different forms of pubescence, it was found that these characters can only be used to separate species which occur in a number of small subdivisions.

Forced back to a consideration of the shape of the filaments, it was found that the species reviewed here all agreed in having abovate, obturllate, linear or narrowly oblong filaments in which the anther bases overlap the expanded portion of the filaments (Fig. 1.1–1.4). On these grounds the genus could be separated into two subgenera as keyed out below.

**Hermannia** subgen. *Hermannia*

*Hermannia* L. subgen. *Hermannia*


Subgen. *Acicarpus* Harv. in l.c. (1860); K. Schum., l.c. (1900).

Type species: *H. hyssopifolia* L.

Herbs, undershrubs or rarely small shrubs, procumbent or erect, generally stellate-pubescent often with glandular or simple hairs intermixed. *Leaves* alternate, entire, lobed or incised; stipules sometimes foliaceous. *Inflorescence* of simple or compound 1 to several-flowered cymes, axillary or leaf-opposed. *Calyx* 5-lobed, tube campanulate to globose. *Petals* 5, obovate to oblong, often narrowed into a claw at the base, slightly to very strongly spirally twisted. *Stamens* 5, filaments expanded, obovate, obturllate, linear or narrowly oblong, the expanded portion overlapped by the anther base not overlapping the expanded portion of the filaments (Fig. 1.5–1.9).

**Key to subgenera**

Filaments obovate, obturllate, linear or narrowly oblong, with the anther base overlapping the expanded portion of the filaments ............................................subgenus *Hermannia*

Filaments abruptly dilated in the upper half or at the apex (more or less cruciform), rarely linear or narrowly obovate-oblong but then the anther base not overlapping the expanded portion of the filaments (Fig. 1.5–1.9) ............................................subgenus *Mahernia*
FIG. 1.—Stamen types in Hermannia. 1–4, filaments as in Hermannia subgen. Hermannia, all with the anther base overlapping the dilated portion: 1, filament obovate-cuneate, *H. althaeifolia* (De Winter & Verdoorn 9063); 2, filament more or less linear-oblong, *H. filifolia* (Taylor 6494); 3, filament narrowly oblong-obovate to obturilate, *H. angularis* (De Winter & Verdoorn 9097); 4, filament narrowly obovate, dilated at the apex, *H. cristata Compton 30024*. 5–9, filaments as in *Hermannia* subgen. Mahernia, variously shaped but the anther base not overlapping the dilated portion: 5, filament abruptly dilated in the upper half (cruci-form), *H. aurocoma* (Acocks 12314); 6, filament abruptly dilated at the apex (subcruciiform), *H. argillicola* (Dinter 8041); 7, filament broadly dilated at the apex, *H. grossularifolia* (Marloth 5300); 8, filament more or less linear, *H. oligospermum* (Estherhaysen 15496); 9, filament obovate-cuneate *H. stric-ta* (Rösch & Le Roux 549).

FIG. 2.—Some diagnostic characters relating to capsules and flowers in the subgen. Hermannia. 1, capsule 5-angled, fringed on the angles, *H. cristata* (Thorncroft 3937); 2, capsule with a pair of horns (developing with age) at the apex of each angle, *H. spinosa* (Cortez & Weger 1739); 3, capsule not fringed on the angles and not horned at the apex, *H. prismatocarpa* (De Winter & Verdoorn 9067); 4, flower with strongly twisted petals (dolls roses) and calyx not inflated, *H. prismatocarpa* (after Flower, Pl. Afr. t. 1625); 5, calyx inflated, *H. comosa* (De Winter 9107); 6, flowers with petals not strongly twisted, more or less bell-shaped, *H. spinosa* (Schlieben 8841).
KEY TO THE SPECIES

1a Capsules fringed on angles with crowded tentacle-like or filiform processes (Fig. 2.1):
   2a Low suffrutex, several stems from a stout rootstock, leaves narrowly elliptic-oblong to lanceolate; fringe of capsule of fairly stout 7 mm long processes; Eastern Escarpment and Soutpansberg.................................................................1. H. cristata
   2b Suffrutex up to 2 m tall, leaves large, suborbicular; fringe of capsule of long, filiform processes; S.W.A.................................................................2. H. merxmueelleri

1b Capsules not fringed as above:
   3a Stems erect, many from a woody rootstock, short, under 30 cm long, more or less leafless in lower half with a few large leaves and yellow flowers borne in upper half.................................................................3. H. sandersonii
   3b Habit not as above:
       4a Inflorescence of simple 1-flowered cymes solitary in axils on leaves of indeterminate growth, sometimes appearing racemose when upper leaves are much reduced; petals not strongly contorted, open flowers bell-shaped (Fig. 2.6):

   5a Petals shorter than calyx, rarely about as long but then shorter than stamens:
      6a Plants with at least outer branches long and trailing; leaves more or less secund:
         7a Leaf-margins conspicuously and densely fringed with hoary-pilose hairs........4. H. seineri
         7b Leaf-margins not as above:
            8a Leaves finely and densely stellate-tomentose at least when young, hairs under 0.5 mm long.................................................................5. H. tomentosa
            8b Leaves densely or sparsely coarsely stellate, hairs comparatively long........6. H. eenii

      6b Plants bushy, erect or suberect:
         9a Branchlets predominantly glandular-pubescent at least in upper half (rarely in H. boraginiflora, e.g. Gilliland 746, not conspicuous or absent):
            10a Leaves sparsely to fairly densely stellate-pubescent:
               11a Capsule densely stellate-pubescent all over; in addition to glandular hairs, branchlets mainly appressed stellate-pubescent........................................7. H. boraginiflora
               11b Capsule glandular-pubescent between the sutures, glabrescent:
                  12a Branchlets with many patent, gland-tipped hairs intermixed with long, pointed, patent hairs.................................................................8. H. glanduligera
                  12b Branchlets densely pubescent with short (under 2.5 mm), glandular hairs not obviously gland-tipped..............................................................9. H. viscosa

         9b Branchlets not predominantly glandular-pubescent:
            14a Low plant with a few slender branches, calyx-lobes long, subulate; capsule with long, slender horns.................................................................12. H. solaniflora
            14b Suffrutices, capsules not or shortly horned:
               15a Leaves stellate-tomentose:
                  16a Leaves very small, mostly under 4 mm long, often recurved, lateral branches sub-spreading, slender, rigid.....................................................13. H. minimifolia
                  16b Leaves mostly over 5 mm long and up to 22 mm long; lateral branchlets not as above:
                     17a Bush, branched at base, branches long and slender, forming a rounded bush about 1 m in diameter; leaves drying a light colour; anthers obviously, usually drying a dark violet; occurs in south-western areas of S.W.A; engleri
                     17b Suffrutex, stems erect, branchlets arcuate-ascending or suberect; leaves drying a darker colour; anthers sometimes dark violet; occurs in the northern areas of S.W.A. around the Etoha Pan.................................................................15. H. guerkeana
               15b Leaves stellate-pubescent but not tomentose; found only along east coast of Zululand and Mozambique......................................................16. H. micropetala

      5b Petals as long as or longer than calyx:
         18a Gland-tipped hairs obvious, especially on branchlets and petals:
            19a Flowers in long, distinct pseudoracemes; petals usually over 1.5 cm long and with a dark blotch near base showing even on dried specimens; capsule blunt.................................................................17. H. amabilis
            19b Flowers axillary or in short, not very distinct pseudoracemes; petals usually under 1 cm long, without a dark spot near base; capsule apiculate or shortly horned at apex of sutures.........................................................18. H. modesta

         18b Gland-tipped hairs not obvious on branchlets and petals:
            20a Annuals, sometimes biennial or triennial:
               21a Weak annual with small flowers usually under 5 mm long; leaves broadly to narrowly ovate-acuminate.................................................................19. H. tigrinensis
               21b Bi- or triennial; flowers 5 mm or longer; leaves variable.................................................................18. H. modesta
            20b Suffrutices, perennial, flowers usually over 5 mm long:
               22a Leaves very narrow, under 2 mm wide, appearing ericoid, clustered.................................................................20. H. linearifolia
               22b Leaves not as above:
                  23a Capsule shortly horned; leaves and branches stellate-tomentose, not laxly stellate-pubescent:
                     24a Flowers in pseudoracemes on long, slender branches..................................................21. H. helianthemum
                     24b Flowers axillary:
                        25a Calyx 5-ribbed, lobed to less than halfway; pubescence same on calyx and leaves .................................................................22. H. damarana
                        25b Calyx not distinctly 5-ribbed, lobed to beyond middle; pubescence on calyx longer and coarser than on leaves.........................................................23. H. guriepina

I. C. VERDOORN

KEY TO THE SPECIES

1. H. cristata
2. H. merxmueelleri
3. H. sandersonii
4. H. seineri
5. H. tomentosa
6. H. eenii
7. H. boraginiflora
8. H. glanduligera
9. H. viscosa
10. H. glandulosisima
11. H. grisea
12. H. solaniflora
13. H. minimifolia
14. H. amabilis
15. H. tigrinensis
16. H. micropetala
17. H. guerkeana
18. H. modesta
19. H. linearifolia
20. H. helianthemum
21. H. damarana
22. H. guriepina
23b Capsule with long, spreading, pilose horns; leaves and branchlets stellate-pubescent or stellate-tomentose (Fig. 2.2): 26a Leaves and branchlets stellate-tomentose, at least when young:
27a A small, many-stemmed leafy bush; confined to edge of Namib... 24. *H. complicata* 27b Suffrutex, divaricately branched, branchlets becoming leafless and indurated: 28a Flowers many, secund, in pseudoracemes; western Cape to S.W.A... 25. *H. trifurca* 28b Flowers in axils of upper leaves; Kalahari and S.W.A............. 26. *H. affinis* 26b Leaves and branchlets stellate-pubescent, not tomentose, or glabrous and minutely papillose:
29a Virgate, erect suffrutex, leaves and branches appearing glabrous but glabriusculous... 27. *H. fruticulosa* 29b Rounded bush with wiry stems; leaves and branchlets stellate-pubescent, glabrescent; peduncles persisting, spreading, indurated, giving spiny appearance to bush.................................................... 28. *H. spinosa* 4b Inflorescence of simple or compound, 1–several-flowered cymes on same plant, arranged in axils of upper leaves and at apices of branchlets forming leafy or leafless, racemose or paniculate cymes, if all cymes 1-flowered, then in sparse terminal racemose cymes; petals strongly contorted ("doll’s roses"; Fig. 2.4), open flowers not bell-shaped:
30a Leaves entire or shallowly crenate or toothed on the margins, if somewhat deeply lobed then not halfway to midrib:
31a Plants with long, decumbent branches, inflorescence and secund branchlets ascending, all terminating in a leafless inflorescence:
32a Leaves long and narrow 1–3 mm broad in middle, appearing linear but tapering slightly towards base into an obscure petiole............................................. 29. *H. lintifolia* 32b Leaves distinctly petioled, blade oblong to ovate, 5–30 mm broad in middle:
33a Flowers 1 cm long or longer, clustered at ends of branchlets on short pedicels, shorter than flowers:
34a Pubescence sparse, stellate hairs short and appressed (see also under 30b).......... 39. *H. procumbens* subsp. *procumbens* 34b Pubescence dense, mostly grey, hairs in part long, grey and matted; hairs few, short or some slightly longer; capsule short, broad, usually under 1 cm long in a leafless inflorescence: 35a Branches fairly densely stellate-pubescent, often with long stiff hairs intermingled; capsule elongating to over 1 cm long (Fig. 2.3)...................... 31. *H. prismatocarpa* 35b Branches appear glabrous, sometimes sparsely and inconspicuously stellate-pubescent, hairs few, short or some slightly longer; capsule short, broad, usually under 1 cm long.................................................... 32. *H. scordifolia* 31b Plants not as above but erect suffrutices, sometimes bushy with ascending branches, or low, woody and sprawling; inflorescences various:
36a Leaves and stipules imbricate, leaves usually longer than internodes, about 12 mm long or less (see also *H. stipulacea* under 36b):
37a Calyx and leaves densely and coarsely pubescent with stellate and tufted golden brown hairs (see also under 36b).............................................................. 75. *H. decipiens* 37b Calyx not densely and coarsely pubescent as above:
38a Leaves finely tomentose or tomentellose; calyx lobed to about one third of its length:
39a Leaves distinctly petioled; mature flowers 10 mm long or more; calyx inflated........ 33. *H. termitifolia* 39b Leaves sessile or subsessile; open flowers less than 10 mm long; calyx subinflated .............................................................. 34. *H. trifoliata* 38b Leaves rough with minute fringed scales or hirsute; calyx lobed halfway or beyond:
40a Leaves broadest at apex, rough with minute fringed scales.................. 35. *H. concinnifolia* 40b Leaves narrowly oblong, sparsely hirsute with long, bulbous-based hairs:...... 36. *H. muirii* 36b Leaves and stipules not obviously imbricate as above:
41a Leaves generally broadest in lower half or oblong-elliptic to broadly oblong:
42a Pubescence mainly rough, especially on branchlets, mostly of dense or sparse, stiffly stellate or bulbous-based hairs:
43a Calyx inflated, narrow at mouth, sinuses narrow (Fig. 2.5):
44a Calyx narrowly urceolate, lobes deltoid; leaves coarsely and densely pubescent with tufted or stellate hairs from a scaly base (see also under 41b)... 54. *H. salviifolia* 44b Calyx globose; leaves mostly basal (also under 42b).......................... 46. *H. comosa* 43b Calyx not inflated or if subinflated then salver-shaped:
45a Flowers mainly basal or in lower half of plant, sometimes some flowers deeply lobed or pinnatisect; flowers in long racemose or paniculate cymes comprising the upper half to two-thirds of plant (see also under 30b):
46a Flowers usually small, up to about 6 mm long on dried specimens; leaves narrowly to broadly oblong or ovate-oblong, coarsely and evenly lobed, 15–20 cm long......................... 91. *H. macra* 46b Flowers over 6 mm long and up to 10 mm long:
47a Leaves oblong-lanceolate to narrowly lanceolate, dentate to deeply dentate...... 92. *H. juttae* 47b Leaves ovate, coarsely crenate to palmatisect............................ 93. *H. paucifolia* 45b Leaves cauline:
48a Flowers small, up to 6 mm long on dried specimens, numerous and short-stalked in each inflorescence:
49a Calyx subinflated, about 4 mm long on dried specimens.................. 37. *H. floribunda*
41b Calyx not subinflated, under 4 mm long on dried specimens:
   50a Leaves distichous, pubescence harsh, mainly of 2 mm long hairs... 74. H. disticha
   50b Leaves not distichous, mainly under 15 mm long; hairs shorter than 2 mm:
       51a Leaves white-tomentose on lower surface (see also under 41b)... 66. H. alnifolia
       51b Leaves not white-tomentose on lower surface, pubescence harsh...

41b Calyx over 6 mm long on dried specimens:
   52a Stipules leaf-like (see also under 42b).........................44. H. althaeoides
   52b Stipules not leaf-like:
       53a Leaves thick-textured, densely pubescent, large, up to 4,5 x 3 cm; flowers large, congested in short inflorescences... 39. H. cordifolia
       53b Leaves and flowers not as above:
           54a Pubescence mainly hispid, calyx sparsely so to glabrous; leaves mucronate..................................................40. H. hispidula
           54b Pubescence mainly of stellate or grouped hairs, calyx subdensely to densely stellate-pubescent:
               55a Leaves strongly crisped as well as crenate on margin; calyx densely stellate with hairs rather long (see also under 41b); Western Province
               55b Leaves shallowy crenate, not strongly crisped as well, stellate pubescence sometimes dense on calyx but hairs not long; Eastern Province

42b Pubescence mainly tomentose, especially on branchlets which are tomentose to smoothly canescent-tomentose or silvery with fringed, pitted scales:
   56a Branches silvery with fringed pitted scales (see also under 30b)................88. H. pulvarena
   56b Branches canescent-tomentose:
       57a Flowers mostly under 6 mm long on dried specimens:
           58a Leaves tomentose on both surfaces; branchlets always canescent... 43. H. minutiflora
           58b Leaves white-tomentose on lower surface only; branchlets not canescent
               (see also under 41b)..................................................66. H. alnifolia
       57b Flowers mostly over 6 mm long on dried specimens:
           59a Stipules leaf-like; calyx hirsute, not narrowed at mouth...... 44. H. althaeoides
           59b Stipules not large and leaf-like, calyx not hirsute if hairs long then grouped on stalks:
               60a Calyx inflated, narrowed at mouth:
                   61a Flowers secund; leaves shortly petioled..................45. H. johannsenii
                   61b Flowers not secund; leaves, especially the lower, long-petioled... 46. H. comosa
               60b Calyx not inflated or subinflated:
                   62a Leaves not normally crisped as well as crenate on margins:
                       63a Inflorescence of 2-flowered cymes in axils of leaves... 47. H. incana
                       63b Inflorescence of long, terminal, leafless, compound cymes... 42. H. althaeoides
                   62b Leaves normally crisped as well as crenate on margins:
                       64a Leaves broadly ovate to sub- orbicular.............................48. H. vestita
                       64b Leaves narrowly ovate to ovate-oblong:
                           65a Calyx subinflated; branches of inflorescence glabrescent, dark and slender..........................49. H. amoena
                           65b Calyx not subinflated; branches of inflorescence not glabrescent..................50. H. disermifolia
               41b Leaves broadest at apex or generally broadest in upper half but varying in shape from filiform, narrowly oblong, oblanceolate and broadly oblong-rectangular to subglobose:
                   66a Calyx inflated, narrowly urceolate to subglobose, narrowed at mouth:
                       67a Leaves softly tomentose on both surfaces:
                           68a Tomentum smoothly uniform; plants up to 1 m tall or taller, calyx subglobose
                               ..............................................51. H. mucronulata
                           68b Tomentum intermixed with long, villose hairs; low plant ± 30 cm high; calyx more or less urceolate..........................52. H. suavis
                       67b Leaves not, or not normally, softly tomentose on both surfaces:
                           69a Leaves usually toothed at apex and in upper half, stellate-pubescent with short hairs, glabrescent; calyx subglobose... 53. H. hysopifolia
                           69b Leaves entire or occasionally obscurely lobed at truncate apex or in upper third; stellate pubescence rough, usually of thick and tufted hairs from a glandular or tubercled base; calyx urceolate (see also under 41a)..........................54. H. salviifolia
               66b Calyx not inflated:
                   70a Leaves velvety tomentose on both surfaces, entire or very shallowly crenate in upper half:
                       71a Stipules not leaf-like:
                           72a Flowers small, 3-4.5 mm long on dried specimens, crowded in compound cymes, terminal on lateral branchlets; leaves fairly broad, often oblong and suborbicular, crenate at least at broad apex........................................55. H. holosericea
                           72b Flowers normally 5 mm long or longer; leaves mostly narrow, usually entire and mucronate:
                               73a Weak twiggy plants; calyx wide, lobed to middle and beyond, scaly, hairs inconspicuous..........................56. H. lavandulifolia
                               73b Virgate shrubs up to 1 m tall or taller; calyx strongly 5-10-ribbed, lobed in upper half, densely pubescent, hairs conspicuous and foxy-coloured.... 57. H. odorata
71b Stipules leaf-like:
74a Leaves petioled, petiole not completely hidden by sessile stipules; flowers yellow:
75a Calyx narrowly obconic, strongly 5-10-ribbed; flowers appear narrowly-waisted
75b Calyx not narrowly obconic:
76a Calyx broadly campanulate; flowers in terminal, leafy, paniculate cymes
76b Calyx tubular-campanulate, lobed in upper half; cymes 1-2-flowered in lax, terminal, leafless, racemose inflorescences
74b Leaves sessile, short petiole hidden by broad, sessile stipules; flowers usually garnet-red.
70b Leaves not velvety tomentose on both surfaces, pubescence rough, or smooth and white only on lower surface, if appearing silvery pubescent on both surfaces then calyx and leaves covered by pitted, fringed scales:
77a Leaves on both surfaces, and calyx covered by pitted, fringed scales giving plants a silvery grey appearance:
78a Calyx deeply to narrowly campanulate, lobed in upper third; leaves cuneate; frequent in eastern and western Cape and O.F.S.
78b Calyx shallowly campanulate to saucer-shaped, lobed almost to middle:
79a Leaves usually deeply divided, if not, then longer than broad, oblong and only slightly narrowed towards base (see also under 30b). . . . 88. H. pulvurata
79b Leaves never deeply lobed, subglobose to obovate-cuneate:
80a Flowers small, up to 5 mm long on dried specimens; leaves suborbicular, distinctly crenate
80b Flowers over 5 mm long on dried specimens; leaves usually garnet-red, obscurely 3- or more-lobed at broad apex; west coast of Namaqualand and Namib in S.W.A.
77b Leaves and calyx not silvery grey from the covering of fringed pitted scales:
81a Leaves with a white, stellate or cobwebby, appressed tomentum on lower surface only:
82a Calyx densely fawn to brown-tomentose with lepidote stellate pubescence, hairs obvious and straw-coloured
82b Calyx thinly stellate-pubescent, the hairs very short or hirsute, not densely brown-tomentose:
83a Flowers small, under 5 mm long on dried specimens, short-stalked, numerous in short, terminal, compound cymes.
83b Flowers usually over 5 mm long; inflorescence not as above:
84a Flowers in long, terminal, leafless, racemose or paniculate cymes:
85a Plants much branched from base, branches arcuate-ascending
85b Tall, virgate shrubs:
86a Inflorescence of lax, paniculate cymes; peduncles and pedicels well developed
86b Inflorescence of racemose cymes, 1-3-flowered and 1-3 at a node, peduncle usually aborted:
48b Flowers in short, few-flowered cymes, terminal on short lateral branchlets or leaf-opposed along the leafy branches:
87a Leaves petioled; cymes very slender, many, axillary or leaf-opposed along leafy branches, curved downwards in helicoid fashion
87b Leaves sessile or sessile-subsessile, cymes terminal on short lateral branchlets:
88a Leaves fascicled, strongly crisped, mostly narrowly oblong-cuneate hairs of calyx
88b Leaves single at a node, distichous, broadly obovate-oblong to ovate-oblong, broadly cuneate or rounded at base; only sometimes white-tomentose on lower surface
81b Leaves variously pubescent but not with a white, stellate or cobwebby tomentum on lower surface only:
89a Leaves suborbicular or broadly oblong to oblong-obovate, only slightly longer than broad:
90a Flowers crowded in dense heads, densely hispid from long, tubercle-based hairs of calyx
90b Flowers in lax terminal cymes:
91a Small plant with slender intricate branches and small leaves . 73. H. micrantha
91b Shrublet 50-90 cm tall with distichous leaves with an average size of 20 x 16 mm (leaves rarely white-tomentose dorsally)
89b Leaves distinctly longer than broad:
92a Pubescence on calyx dense, golden brown coloured:
93a Bracteoles long, subulate, conspicuous at base of flowers:
94a Leaves small, about 12 mm long, often subimbricate; bracteoles reaching lower third of calyx
94b Leaves variable, usually over 15 mm long; bracteoles often reaching to top of calyx
93b Bracteoles not long and subulate:
95a Leaves densely and persistently pubescent on both surfaces . 77. H. pulvurata
95b Leaves laxly to subdensely stellate-pubescent, hairs long from a scaly base
92b Pubescence on calyx not dense and golden brown:
96a Branches glabrous or pubescent to scaly-pubescent, at least on new growth;
97a Calyx parchment-like, angled at the sinuses, broad-based with broad, ovate lobes; south western Cape (see also under 96b) ... 85. H. angularis
97b Calyx not as above:
98a Leaves filiform, ericoid, acute, glabrous and clustered; Great and Little Karoo ... 79. H. filifolia
98b Leaves not as above, if some appear filiform (conduplicate) then not completely glabrous or plants restricted to Coastal Fynbos:
99a Branches, leaves and calyx glabrous; Western Cape ... 80a. H. denudata var. denudata
99b Branches, leaves and calyx not totally glabrous:
100a Leaves mostly acute and dentate in upper half; Transvaal ... 80b. H. denudata var. erecta
100b Leaves most adnate at or near apex which is rounded, mucronate or lobed:
101a Calyx half or more than half as long as petals, sinuses V-shaped:
102a Leaves glabrescent at least on upper surface, often flat and up to 12 mm broad at apex ... 81. H. flammnea
102b Leaves persistently stellate-pubescent on both surfaces, folded, at most 5 mm broad at apex ... 82. H. flammula
101b Calyx usually less than half as long as petals, wide and shallow at maturity, sinuses wide ... 83. H. joubertiana
96b Branches very rough with prominent scattered tubercle-bases or harsh stellate pubescence, rarely glabrous but rudimentary tubercle-bases can be seen:
103a Inflorescence of long, terminal, leafless, racemose or paniculate cymes; petals exerted from calyx-tube by about half ... 84. H. scabra
103b Inflorescence terminal on leafy branches and on very short, leafy lateral branches; petals shortly exerted from conspicuous calices:
104a Calyx glabrous except for small stellate hairs along margins of lobes ... 85. H. angustifolia
104b Calyx rough with tubercle-bases of stellate or grouped hairs ... 86. H. rufus
30b Leaves all, or at least some, deeply toothed or lobed to about halfway to midrib or pinnately or palmately divided:
105a Branchlets or branches of inflorescence canescent with silvery-fringed or stellate scales:
106a Calyx large, inflated, subglobose, up to 10 mm diameter; cauline leaves well developed ... 87. H. abrotanoides
106b Calyx small, not inflated, about 5 mm long; leaves mainly basal (see also under 30a) ... 88. H. pulverata
105b Branchlets and branches of inflorescence not canescent, usually laxly and roughly stellate-pubescent:
107a Stems decumbent with only apical portion ascending; leaves cauline and usually secund, erect from trailing stem (see also under 30a) ... 89. H. procumbens subsp. myrhrifolia
107b Stems not decumbent; leaves not as above:
108a Suffrutex, up to 60 cm tall, much branched above, branches slender; leaves basal and cauline deeply and finely pinnately divided up to 25 mm long; inflorescence of terminal, leafless, racemose cymes ... 90. H. confusa
108b Low plants with many stems from a woody base; leaves mainly basal; inflorescence of long, terminal, leafless, paniculate cymes:
109a Flowers small, to 6 mm long on dried specimens; leaves more or less oblong, about 15–20 mm long, broadly and unevenly lobed, sometimes deeply so but not to midrib (see also under 30a) ... 91. H. macrophylla
109b Flowers over 6 mm long:
110a Leaves oblanceolate to narrowly lanceolate, 20–60 mm long, coarsely crenate or toothed, not palmatisect (see also under 30a) ... 92. H. juttae
110b Leaves ovate in outline, 15–30 mm long, usually palmatisect with segments irregularly twice-lobed (see also under 30a) ... 93. H. paeufolia


Suffrutex with several stems from a stout, woody rootstock; stems usually less than 30 cm tall, simple to laxly branched in second year, fairly laxly stellate-pubescent and with minute glands or minute gland-tipped hairs intermingled. Stipules linear-filiform or linear-lanceolate, about 5 mm long and less than, or to 1 mm broad, sparsely stellate-pubescent. Leaves shortly petiolate; blade elliptic, elliptic-oblong, ovate-elliptic or lanceolate, 2–6,5 cm long, 0,3–2,2 cm broad, crenate-dentate, crenations sometimes small and distant, concolorous, upper surface with impressed veins, fairly densely to sparsely pubescent with simple or 2- or more-rayed, bulbous-based hairs, lower surface with prominent veins and sparsely stellate-pubescent with hairs usually shorter than on upper surface; petiole 1,5–6 mm long. Inflorescence axillary and terminal, flowers usually solitary on long peduncles up to 5 cm long; pedicels short, about 5 mm long; bracts linear-filiform, 1–2 on peduncle and 2 at base of pedicel, about 1–3 mm long. Calyx 8–14 mm long, linear-lanceolate, about 5 mm long and less than,
lobed to midway or just beyond, stellate-pubescent without and usually intermingled with minute gland-tipped hairs. *Petals* 1,1-1,9 cm long, "cinnamon", "red-orange", "orange", "red", upper third suborbicular, slightly broader than long, narrowing into a claw with infolded margins. *Stamens* united at base to a long stipe, free part of filaments hyaline, narrowly obovate, broader at apex, about 1 cm long, obscurely stellate on shoulders; anthers about 1 cm long, ciliate along basal portion overlapping dilated filaments. *Ovary* stiltolate, 5-angled, densely stellate-pubescent, stellate pubescence on keel of angles shortly stalked; styles 6 mm long, minutely and sparsely hairy with short patent hairs. *Capsule* oblong-orbicular in outline, deeply 5-angled, roughly pubescent with short-rayed, stellate hairs and fringed on keel of angles with rows of 2 to 3 series of long, filiform processes, 1-5,5 mm long, acute, at base by persistent calyx and reflexed petals. *Capsule* about 1,5 cm long, deeply 5-angled, crest of angles furnished with 2 to 3 series of long, filiform processes (elongated stalks of stellate hairs?), rest of capsule shortly stellate-pubescent; stipe partly hidden at base by persistent calyx and reflexed petals.

*Found* "among rocks on hillsides". Recorded from the slopes and gorges of the Brandberg, South West Africa.

**3. Hermannia sandersonii** Harv. in F.C. 1: 200 (1860); Wood & Evans, Natal Plants 1: 19, t.20 (1893); K. Schum. in Engl., Monogr. Afr. Afr. Pfl. 5: 60 (1900). Type: Natal, "Port Natal", *Sanderson* s.n. (TCD, holotype; PRE, photo: !K; !S; PRE!).

Low suffrutex; stems many from a thick, woody rootstock, simple or laxly branched, more or less leafless in lower half, subdensely and coarsely hairy with bulbous-based stellate hairs, rays about 1 mm long, acute. *Petals* ovate-lanceolate or linear-lanceolate, about 7 mm long, green and purplish blue at the apex on inner face, 17-20 mm long, upper third suborbicular, narrowed into a long claw with infolded margins. *Stamens* with hyaline, narrowly obovate-cuneate, apparently glabrous filaments which are attached to the long stipe at base, free portion about 6 mm long; anther 8 mm long ciliate, pointed, overlapping filament at base. *Calyx* about 5 mm long, densely hairy with long-stalked, long-rayed, stellate hairs, stalks subulate or filiform; stipe about 6 mm long; styles 7,5 mm long. *Capsule* about 1,5 cm long, deeply 5-angled, crest of angles furnished with 2 to 3 series of long, filiform processes (elongated stalks of stellate hairs?), rest of capsule shortly stellate-pubescent; stipe partly hidden at base by persistent calyx and reflexed petals.

To date this remarkable species is known only from the Brandberg in South West Africa. It is the tallest known *Hermannia* in southern Africa, being 2 m tall.

In the fringed angles of the capsule it resembles only one other species on the subcontinent, namely *H. cristata*, in which, however, the processes of the fringe are slightly stouter. In habit these two species differ widely, for in *H. cristata* the stems are under 30 cm tall and subherbaceous. For further differences see under *H. cristata* (p. 7).


Shrub about 2 m high, branches stellate-tomentose with long, patent, minutely gland-tipped hairs intermingled. *Stipules* subulate, 2-6 mm long, stellate-pubescent. *Leaves* petiolate; blade broadly ovate-
strong, prominent ribs and margins, lobes deltoid. *Petals* yellow, recurved in upper half, about 9 mm long, about 6,5 mm broad in the broadly rounded upper third, narrowing to a 2 mm waist and produced into a short, slightly incurved and pointed style with broadened margins of which the edges are membranous and obscurely hairy. *Stamens* about 6,5 mm long; filaments joined at base, halyine, narrowly obovate, about 3 mm long with 1 or 2 stellate hairs on shoulders; anthers about 4,5 mm long, overlapping filaments for 1 mm. *Ovary* 2,5 mm long, 2,5 mm diam., 5-angled, densely hairy with sessile and stalked stellate hairs, stipe 5 mm long. *Capsule* about 9 mm long, 7 mm diam., 5-lobed and bluntly 5-umbonate at apex, pubescent with sessile and stalked hairs, shortly stipitate, with the persistent calyx like a disc at base. Seeds reniform-orbicular, black, plicate.

Found on grassy hills and in grassy gorges. Recorded from the Camperdown, New Hanover, Pietermaritzburg and Durban Districts of Natal.

**Natal.**—Camperdown: Inchanga, Marlosh 4090; Medley Wood 4654; 6536; Umlaas, Maurice Evans 548A (NH); Shongweni Dam, Ross 1292; 413 (NH). Durban: "Port Natal", Sandersonii, without exact locality, Gerardt 1117 (W), New Hanover: King's Hill Halt, Gordon-Gray 6320. Pietermaritzburg: in valley 5 km from Table Mtn, Stirton 1024.

This species is readily distinguished by its general appearance. The many, short, suberhaceous stems from a woody rootstock are more or less leafless in the lower half and bear comparatively large discolorous leaves and a few yellow flowers in the upper half. A collector records that the flowers develop in advance of the leaves.

*H. sandersonii* is poorly represented in herbaria and most of the specimens seen were collected in the last century.


Stems procumbent, slender, long, wiry, laxly branched near base, obviously hoary-pilose intermixed with appressed stellate pubescence. *Stipules* narrowly linear-lanceolate, about 4 mm long, hoary-pilose. *Leaves* petiolate; blade narrowly ovate to obovate-oblong, 2-3,5 cm long, up to 9 mm wide, usually folded, subrounded at apex, broadly cuneate at base, upper surface roughly stellate-pubescent, lower surface stellate-pilose with long hoary hairs; margins obscurely serrate and densely hoary-pilose; petiole about 1 cm long. *Inflorescence* of simple 1-flowered cymes solitary in axes of leaves; peduncle slender, straight, 2-2,5 cm long, hoary-pilose; pedicels cuneous, slender, about 2-3 mm long; bracts about 3 mm long, narrowly linear to subulate. *Calyx* hoary-pilose outside and on margins, lobed to beyond middle, about 7 mm long, lobes 5 mm long. *Petals* "orange", "cream", about 5 mm long, broadly oblong to subglobe, narrowed at base into a short claw, margins inrolled on claw and basal portion of blade. *Stamens* with filaments broadly obovate, narrowing at apex to an acute connate, 2,5 mm long, sparsely pilose on shou de s; anthers erect, about 5,5 mm long, basal portion overlapping expanded filaments, sparsely pilose. *Ovary* about 2 mm long, sparsely minutely stellate with simple hairs interspersed; styles about 5 mm long, sparsely pilose. *Capsule* 6 mm long, hoary-pilose, 5-umbonate or shortly horned at apex. *Seeds* reniform, dark brown, several in a locule.

Found on level, well-drained sand in grassland and on loose sand dunes in north-eastern South West Africa and in Botswana.

**S.W.A.—Otjijtika:** Dinter 2871 (SAM); Omaramba Omatako, Sections 2871 (SAM); Botswana.—Ngamiland: Pandamatanga road, c. 100 km S. of Kazungula on road to Nata, Verhagen & Barnard 162.

Before 1977 only two specimens had been seen of this species, Dinter 2871 (SAM) and Schoenfelder 190 (PRE), both with a hoary pubescence unusual for the genus. Not only did these specimens answer well to the description of *H. seineri*, but Dinter 2871 is a syntype of the species and Schoenfelder 190 had been matched with Dinter 2871 in B (now destroyed). Good material (Verhagen & Barnard 162) collected in Botswana during 1977 matched these specimens in detail and confirmed that *H. seineri* evidently is a good, well-defined species.

For *H. seineri* var. latifolia Engl. see under *H. cenii* (p. 10).


**Hermania brachypetala** Harv. in F.C. 1: 202 (1860); K. Schum. in Bot. Jb. 10; 42 (1889); in Engl., Monogr. Afr. Pl. 5: 86 (1900). Syntypes: Transvaal, Magaliesberg, Burke & Zeyher s.n. (SAM); Cape, Zeyher 548A (NH); Cape, "Zooloo Country", Miss Owen s.n. (PRE, photo.).


Perennial, branches long, at least the outer decumbent and trailing, young branchlets stellate-tomentose, hairs mostly short, interspersed with longer, tufted bristles and rarely with short, gland-tipped hairs, tomentum sometimes disappearing leaving only tufted bristles. *Stipules* linear-acuminate to subulate, 2-5 mm long, tomentose. *Leaves* petiolate; blade ± oblong to narrowly oblong-elliptic, 8-50 mm long, 5-15 mm (rarely 18 mm) broad, rounded or subtruncate at apex, rounded to somewhat cuneate at base, margin obscurely to distinctly toothed except in lower third, stellate-tomentose on both surfaces, hairs very short, tomentum persisting at least on undersurface; petiole 3-15 mm long. *Inflorescence* of simple 1-flowered cymes, solitary in axils of leaves on branches of indeterminate growth; peduncle straight, 10-15 mm long, tomentose; pedicels cuneous, about 2,5-4 mm long, bracteate at base; bracts 2 or 3, sometimes 1 of these on peduncle, about 3 mm long, narrowly lanceolate-acuminate. *Calyx* lobed almost to base; tube about 2 mm long, lobes 4,5-6 mm long, reflexed in fresh flower, tomentose on outside and on upper portion of lobes within. Petals pink, mauve, off-white with deep pink base, or "yellow and red", shorter than calyx, more or less oblong-globose, narrowing at base into a claw, margins involute on claw and sometimes narrowly so on blade also, only obscurely lobed at base of blade, lobes not thickened but sometimes darker in colour, with short, appressed hairs within upper part of claw or base of blade; blade about 3 mm long, 2 mm broad with the margins sometimes partly inrolled; claw 1 mm long. *Stamens* with filaments broadly obovate, narrowing at apex to
an acute connective, 2.5 mm long, sparsely hairy on shoulders; anther erect, about 5.5 mm long, 1 mm broad near base, narrowing to an acute apex, basal portion overlapping filament for 2 mm, and sparsely hairy. Ovary (Z). Kimberley: Kimberley. Acoks 43. Kuruman: Wonderwerk, Esterhuysen 2247. Mafeking: Mafe king, Brueckner 518. Prieska: Priesca, Bryant 281. Vryburg: Palmyra, Rodin 3517.

On found on grassy plains and on slopes of mountains and hills. Recorded from Transvaal, Orange Free State, northern Cape and from South West Africa, especially in southern and central areas; also in Botswana and Rhodesia.


This species is characterized by the long trailing branches with secund leaves and a strong taproot with long secondary roots spreading horizontally. The young branches and leaves are stellate-tomentose, the branches with secund leaves and a strong taproot with long secondary roots spreading horizontally. The short fine tomentum usually persisting at least on the lower surface of the leaves.

Throughout the wide area of distribution, and especially where it overlapped with that of other species, occasional specimens are found that appear to be forms or hybrids of the species, for instance a small-leafed form occurs fairly frequently. Until a more in-depth study is possible these are here included under *H. tomentosa*. One such specimen is *De Winter* 3378, mentioned under *H. engleri* Schinz in F.S.W.A. 84: 14. *Dinter* 5164, also mentioned in F.S.W.A. i.e., approaches *H. minutimollis* form or hybrid of that species.

In the past this species has been confused with *H. lanceolata*. This is mainly due to Harvey, who in F.C. 1: 219 cites an unnumbered specimen of Berkeley & Zeyher from the Magaliesberg under *H. tomentosa*. Although it is obviously *H. lanceolata*. It has been established that *H. lanceolata* does not occur on the Magaliesberg and the locality description of the species must thus be considered to be incorrect. Berkeley & Zeyher did collect both these species. *H. tomentosa*, which grows on the Magaliesberg, is represented in their collections by Berkeley & Zeyher 137, while *H. lanceolata*, which they collected before they reached the mountain, is represented by Berkeley & Zeyher 255 and Zeyher 107.


*H. brandtii* Engler, ex Dinter in Reprium nov. Spec. Regni veg. 18: 25. (1922). Based on *Dinter* 725 from Otavi, nom subnud. *H. karakowskiensis* ined., nom. on *Dinter* 7315 (PRE!; Z!).

Perennial, prostrate with long slender runners, coarsely-stellate-pubescent, often intermixed with bristle-like, ± patent setae from a bulbous base, 1–2 to several in a cluster, especially obvious in young growth, hairs straw-coloured to bright yellow. *Stipules* linear to narrowly ovate-acuminate, about 3 mm long, sparsely setose, setae up to 1 mm long from a bulbous base. *Leaves* petiolate; blade linear-oblong, lanceolate-elliptic to ovate-elliptic or oblong-elliptic, varying in size, sometimes on same plant (leaves on ultimate branchlets much smaller), 1.5–6 cm long, 0.4–2.5 cm broad, coarsely-stellate-pubescent, from densely to sparsely so, more or less rounded at base, rounded, truncate or acute at apex, obscurely to distinctly crenate at least in upper half; petiole 2–20 mm long, coarsely, stellate or with tufts of setae (few hairs in a tuft). *Inflorescence* of 1-flowered cymes, axillary on long branches and crowded at apices of ultimate branchlets; peduncles slender, up to 3 cm long; pedicels short, up to 3 mm long; bracts 2–3 at apex of peduncle, linear-lanceolate, 2.5–4 mm long, 0.5–1 mm broad near base, setose or stellate. *Calyx* lobed almost to base, coarsely stellate outside and on upper portion of lobes within, tube about 2 mm long, lobes about 6 mm long. *Petals* usually pink, sometimes white or white with a dark patch near base, 3–6 mm long, shorter than calyx, oblong or oblong-obovate, obscurely clawed, about 4 mm long and 2 mm broad, margins slightly to clearly inrolled on both blade and claw, shallowly lobed at base of blade, inner surface of petals with minute appressed hairs about midway between marginal lobes, apex rounded to subtruncate. *Stamens* with obovate, hyaline filaments which are setose on shoulders, 2 mm long, 2 mm broad at apex with a short apicule, joined to anther near its base; anthers erect, about 6 mm long, basal portion overlapping expanded portion of filament for 1 mm, thence narrowing to an acute apex, minutely hairy. *Ovary* stellate-pubescent with bristle-like hairs which are sometimes golden-yellow and often concentrated at apex, minutely papillose under stellate pubescence; styles very slender, erect, about 6 mm long, with short, spreading hairs in lower half. *Capsule* coarsely-stellate-pubescent and with bristle-like hairs especially at apex, about 5.5 mm long, 5 mm diam., obscurely 5-lobeod, lobes with blunt apices, not produced into horns. *Seeds* brown, reniform, corrugated.

Found in sandy parklands, on dunes or in savanna. Recorded from the northern and eastern regions of South West Africa and the northern Cape where it

* *Dinter* 725, collected at Aris Aukas, and the same number collected at Otavi, are represented in W, BM. These are obviously not the same gathering, the former dated 1918-12-29 and the latter 1908-11-29, but they both fall within the range of *H. eunii* Bak. f.
borders on South West Africa and Botswana. Also in Botswana, Rhodesia, Zambia and Angola.

CAPE.—Gordonia: Kalahari Gemsbok National Park, Mata Mata, Werger 1824.

S.W.A.—Grootfontein: Auros, Dinter 5455; Simkue, Story 6151; Tsueh, Dinter 7464; Oliewenhof, Meurer & Giess 3014. Okavango: Makambo Camp, De Winter 3863; Kake Camp, De Winter & Wiss 4384. Otjiwarongo: N.E. of Otjiwarongo, De Winter 2845.

This species is distinguished from H. tomentosa by the leaves, even the young ones, being coarsely stellate-pubescent, often intermixed with bristle-like setae, and not finely stellate-tomentose as in H. tomentosa. The general colour of the plants is very variable; some appear grey, others golden yellow. In fresh specimens the leaves are crystalline. The setae, which are found in most parts of the plant, and especially on very young leaves, vary from whitish to golden yellow.

Forms or hybrids appear to occur in H. eenii, as in many other species of Hermannia. For example Hanekom 2230 from Barkly West District appears to be a hybrid between H. tomentosa and H. eenii.


Suffrutex, bushy, much branched from base; branches and branchlets suberect or ascending, stellate-pubescent or pubescent with short, patent, gland-tipped hairs, sometimes with stellate hairs intermixed, rarely with a few simple patent hairs as well. Stipules from under 1 mm to 4 mm long, up to 1,5 mm broad, subulate to deltoid-oblong. Leaves petiolate, blade elliptic, oblong or obovate-oblong, acute or more often broad at the apex and 3-toothed, up to 27-14 mm, upper leaves sometimes narrowly elliptic, entire and acute, 6-20 mm long, 3-4 mm broad, stellate-pubescent on both surfaces, more densely so on the lower, sometimes some gland-tipped hairs present and very minute scales; margins usually crenate-dentate at least in upper portion, upper leaves often entire; petiole 1,2-10 mm long. Inflorescence axillary, 1-flowered; peduncle stellate-pubescent or with usually gland-tipped hairs, about 6-22 mm long, 2-3-bracteate at apex, sometimes with a fourth lower down on peduncle; bracts 1-2 mm long; pedicels 3-7 mm long, pubescent like the peduncles. Calyx lobed to beyond the middle, stellate-pubescent without, often intermingled with gland-tipped hairs, especially on margins of lobes; tube about 2 mm long; lobes deltoid-acuminate, about 5,5 mm long. Petals pink or off-white with a pair of oblong, deep pink patches on lower half of inner face, oblong-cuneate, about 6 mm long, lobed about midway, lobes ciliate and some pubescent on inner face of petal, lower half with inrolled margins. Stamens with hyaline, obovate-elliptic filaments, about 4 mm long, ciliate on the shoulders; anthers acute, about 5 mm long, ciliate, overlapping the filament for 1,5 mm. Ovary stipitate, stellate-pubescent, stipe 1-2 mm long; styles about 6 mm long. Capsules densely stellate-pubescent, about 6 mm long, 5 mm diam., truncate at apex with 5 pairs of horns about 1,5-2 mm long) at apex of sutures.

Occurs on rocky hillsides, on mountain slopes, in dry sandy soils and on old lands. Found in the northern Cape, Natal, Swaziland and Transvaal. Also recorded from Rhodesia, Botswana and Mozambique.


NATAL.—Ubombo: coastal belt on margins of pans, Tosh 52 (NH).

SWAZILAND.—Lubombo: Stegi, Blue Jay Ranch, Compton 29561 (NBG).


Characterized by the roughly stellate-pubescent calyx and capsule.

In Gillillands 746 from Letaba, gland-tipped hairs are inconspicuous or absent. This may be an aberrant form. It approaches the east coast species H. micro-petala, but its petals are rather long. It falls within the distribution area of H. glanduligera but has the stellate pubescence of H. boraginiflora.


Perennial, bushy, much branched from base, 30-60 cm tall; branches and branchlets pubescent with 1- to several-celled glandular hairs and many gland-tipped hairs intermixed with some long, patent, pointed hairs. Stipules 0.75-2 mm long, up to 1 mm broad. Leaves petiolate; blade on upper branches more or less narrowly oblong, very variable in size and on some branches much reduced, ranging from about 6 mm x 1.5 mm to 30 x 14 mm, rounded or shortly cuneate at base, usually broadly acuminate towards apex, margins serrate, coarsely and usually sparsely stellate-pubescent on both surfaces, with some glandular hairs intermixed and sometimes gland-tipped hairs present as well, especially along margins and with numerous, minute papillae on the surfaces, petiole 1,5-15 mm long, the longer longer. Inflorescence of 1-flowered cymes in axes of leaves, solitary but appearing racemose in specimens where leaves on ultimate branches are much reduced; peduncle usually short, 5-14 mm long, occasionally (as in the type) up to 25 mm long, persistent, 2-3-bracteate at apex (bracts under 1 mm long), pubescent with glandular or gland-tipped hairs and sometimes with oblong, pointed, patent hairs intermixed; pedicels 2-4 mm long, pubescent. Calyx about 7 mm long, lobed to beyond middle, pubescent outside mainly with glandular hairs, but sometimes stellate hairs present and long non-glandular pointed hairs as well; lobes pubescent inside with appressed, non-glandular hairs. Petals pale pink to pale violet, sometimes with a red base, narrowly oblong-cuneate or suborbicular-cuneate, 2-6 mm long, 1-2.5 mm broad in upper half, margins inrolled in lower half only, auricles thickened and infolded.

This species is characterized by the roughly stellate-pubescent calyx and capsule.
with a thickened ridge between them, auricles and ridge densely to laxly setose. *Stamen* from about 6 to 10 mm long; filaments up to 4 mm long, hyaline, obovate, setose on shoulders; anthers up to 8 mm long, erect, pointed, overlapping filaments at base, sparsely patently pubescent (on a few specimens anthers aborted, blunt, about 1.5 mm long). *Ovary* stipitate at base (stipe up to 1.5 mm long), pubescent with short glandular hairs and with pointed setae along the sutures. *Capsule* up to 7 mm long and about as wide, glandular-hairy on surface between sutures, setae along sutures, blunt or with horns eventually up to 2 mm long; seeds more or less reniform, corru­
gated, granular and with minute papillae.

Found in sandy to semi-sandy bushveld of the warmer regions, usually in dry riverbeds, along streams or rivers, sometimes as a weed in lands or broken ground. Recorded from the drainage basin of the Okavango and Etosha Pan in northern South Africa, through the northern and eastern Transvaal and Swaziland to Zululand. Also occurs in Botswana, Zambia and eastwards through Rhodesia and Malawi to Mozambique.


**Swaziland.** Useke, South of Imfolozi, *Bolus* 30099.

**Transvaal.** — Barberton: Komoatipoort, Marloth 5452; Kaap­
muiden, *Rogers* 25064; Galpin 745; Crocodile River Drift, *Bolus* 7685; Letaba: Kruger National Park, Letaba-laagwater­
bruin; *Vand der Schijff* 17607. Lydenburg: Driekop, *Van der Schijff* 4210. Ovamboland: Oshigambo, *De Winter* 3178 from Kaokoland may belong here, but with certainty.


The isotype gathering represented in the Leningrad Herbarium is not typical of the species. It must have been collected in optimum conditions. The leaves are all well developed, the branchlets straight and the peduncles much longer than usual.

K. Schumann includes this species under those with carpels not horned but they are sometimes shortly horned.

*Giess* 3178 from Kaokoland may belong here, but the specimen is incomplete and cannot be identified with certainty.

The species is characterized by glandular and gland­
tipped hairs intermingled with long, pointed hairs on the branches, a lax, coarse, stellate pubescence on the leaves and the capsule with glandular setae only along the sutures. Noteworthy, too, are the short horns on the capsule and the thick auricles on the petals.


S.W.A.—Okavango: between Shanwara and Kangongo, *De Winter & Leistner* 5691. It answers well to the original description of the species and is cited in F.S.W.A. under *H. viscosa* together with *Merxmüller* & *Giess* 1432 and 1461.


Suffrutex, erect, over 30 cm tall, much branched, ultimate branchlets short, slender; branches and branchlets fairly densely pubescent with short, patent, glandular hairs, some of them gland-tipped, very rarely a few long, pointed hairs occur. *Stipules* narrowly deltoid to subulate, ± 1 mm long, stellate­

pubescent and usually with one long, pointed hair at apex. *Leaves* petiolate; blade narrowly to broadly oblance-obovate, 2,5–12 mm long, 1–6 mm broad, toothed in upper portion, densely stellate-pubescent, hairs short, spreading or suberect (tufted), especially on veins beneath; petiole 1–4 mm long, pubescent. *Inflorescence* axillary, solitary, 1-flowered; peduncle 5–9 mm long, 2–3-bracteate at apex; bracts about 1,5 mm long, more or less subulate, stellate-pubescent and with a few long, pointed hairs; pedicels 2–4 mm long, almost straight to cernuous, pubescent like the peduncle. *Calyx* about 7,5 mm long, tube about 1,5 mm long, lobes 6 mm long, outside stellate-pubescent over glandular papillae, inside the lobes are pubescent with appressed hairs. *Petals* narrowly to broadly oblong-obovate, 3–4,5 mm long, up to 2 mm wide, margins inrolled on claw only, auricles at centre infolded, fairly thinly fringed with whitish, diaphanous setae. *Stamen* about 7 mm long; filament hyaline, obovate, 2,5 mm long, pubescent on shoulders;
anthers about 6 mm long, overlapping filaments for about 1 mm. Capsule 3–5 mm long, shallowly 5-lobed, mucronate at apex of lobes, glandular-papillate on surface, stellate or with clustered rather short setae on sutures; stipitate.

Recorded from Swakopmund District (eastern border) and Karibib northwards to the borders of Etosha and the eastern border of Kaokoland.


Close to H. glanduligera and H. viscosa but differs from both mainly in the finer and denser pubescence on the leaves.

In the original description the locality of the type of H. glandulosissima, Dinter 182, is given as “Damara­land, Namib, bei Pforte, Kilom 82”. This means it cannot be from Pforte in the Outjo district. This is from “Pforte, Kilom 82”, but on this label is the Type: as above.

Published.

Nov., by N. S. Pillans but this name was never published.


Type: as above.

Suffrutex, about 60 cm tall, branched in lower half, stems reddish brown but covered with grey-stellate tomentum; branches virgate, finely grey stellate-tomentose and leafy in lower half, in upper half leaves much reduced, and pubescence reduced mainly to short simple, patent, gland-tipped hairs, some stellate hairs present. Stipules subulate, under 1 mm long. Leaves petiolate; blade narrowly oblong-elliptic, 1,5–4,5 cm long, 0,2–1 cm broad, densely and finely stellate-tomentose on both sides, margin sometimes with short gland-tipped hairs, entire or dentate except in the lower portion; petiole 1–6 mm long. Inflorescence axillary, solitary, 1-flowered, in axils of upper, much reduced, leaves and so appearing racemose; peduncles with short, patent, gland-tipped hairs, 15–21 mm long, minutely bracteate at apex; pedicels 2–6,5 mm long, pubescence same as on peduncles, but with stellate hairs as well. Calyx up to 9 mm long, densely and finely stellate-tomentose, glandular hairs obscured, lobes up to 6,5 mm long, inner face lined with appressed hairs. Petals 3–6 mm long, 2–3 mm broad in upper portion, ± obovate-spatulate, margin inrolled on claw only, auricles not thickened but with pointed, diaphanous setae along the inner edge, inner central face minutely brown-papillate. Stamens with hyaline, obblate (kite-shaped) filaments, ciliate in upper portion. ± 3 mm long; anthers about 7 mm long, with the basal portion overlapping the filaments, sparsely patently pubescent. Ovary shortly (0,5 mm) stipitate, 2,5 mm long, 1 mm diam., finely stellate-pubescent and glandular with tufted setae at the apex; styles ± 5,5 mm long, sparsely pubescent in basal portion. Capsule 6–8 mm long, about 6 mm diam., densely and finely stellate-tomentose (glandular hairs or papillae obscured), stipe short, short horns ultimately produced to about 1,5 mm long; seeds subreniform, corrugated and minutely granular to tuberculate.

Found on sandy ridges and flats and in brackish ground. Recorded from Waterberg and Soutpansberg Districts; also in Botswana.


Characterized by the finely stellate-tomentose stems and branches of which the upper portions become pubescent with short, gland-tipped hairs, the densely stellate-tomentose leaves which become reduced to bracts in the upper half giving the appearance of a raceme to the axillary 1-flowered inflorescences and the capsule which is finely stellate-tomentose.


Low, frutescent plant, 10–40 cm high with a few slender branches from or near base; branches simple, densely to subdensely appressed stellate-pubescent. Stipules small, up to 1 mm long, subulate to oblong, acuminate, often obscured by the pubescence. Leaves all, or those in upper portion, often reducing markedly in size, petiolate; blade elliptic, narrowing slightly to base and apex or apex truncate or rounded and crenate, about 8 × 4 mm, lower leaves usually broadly elliptic to oblong, crenate in upper half, often up to 12 × 9 mm; stellate-pubescent on both surfaces, densely so beneath; petiole 1–3 mm long. Inflorescence of simple, 1-flowered cymes solitary in axes of leaves and appearing racemose towards ends of the branches because of reduced leaves; peduncles slender 10–15 mm long, persistent stellate-pubescent; pedicels cernuous, 1–3 mm long, usually more densely stellate-pubescent than peduncles. Calyx lobed to beyond middle, stellate-pubescent; lobes long, attenuate, 5–8 mm long, reflexed at one stage in open flower; tube about 2,5 mm long. Petals red, spathulate, about 6 mm long, 2,5–3,5 mm broad in upper half, margins inrolled on the claw, at one stage in open flower reflexed from the middle. Stamens with dark purple, erect anthers about 6–10 mm long, pubescent; filament obovate, hyaline, no pubescence seen, about 3 mm long, overlapped by anther base for about 1 mm. Ovary about 3 mm long, and 2 mm broad, pubescent with short, stellate or simple bulbous-based or gland-tipped hairs and at apex with long, acute hairs; cells 2-horned. Capsule with short, stellate and glandular hairs, with long, acute hairs at apex, horns 1–2,5 mm long.

Found in sandy beds of watercourses or ravines from Swakopmund to Kaokoland in South West Africa.

Characterized by short petals which reflex, stellate-pubescent branches, shortly stellate-glandular and setose capsules with short horns and stipe, and long attenuate calyx-lobes.


Suffrutex, erect, up to 60 cm tall, ultimate branchlets short, slender, rigid, and divaricate, stellate-tomentose. *Stipules* about 1 mm long, stout, tomentose. *Leaves* not, or very shortly, petiolate; blade densely stellate-tomentose, on average about 2.5 mm long and 1 mm broad, usually shorter than 5 mm, broadly elliptic or obovate-cuneate, recurved, apex acute or truncate and 2-3-lobed, margins entire or very sparsely toothed in upper half; petiole very short or absent. *Inflorescence* axillary, 1-flowered; peduncle about 2 mm long, stellate-tomentose; pedicel about 3 mm long, roughly stellate-tomentose; bracts caducous. *Calyx* roughly stellate-tomentose without, lobed almost to base, tube about 2 mm long, lobes about 5 mm long, long-acuminate apex, stipes with minute, up to 0.5 mm long, obscurely appressed hairs. *Ovary* densely stellate-tomentose (with rays sometimes over 0.5 mm long), 4 mm long, 4 mm broad near apex, with 5 blunt horns at apex; ovules probably 6 in a cell. *Capsule* densely stellate-pubescent with 5 short, blunt horns about 1 mm long.

Recorded from the dunes south of Kuiseb, South West Africa.

*S.W.A.—Swakopmund: south of Kuiseb, *Strey* 2442.

Characterized by the very small, sessile, or almost sessile, leaves and the short, rigid, ultimate branches which become indurated.

*Dinter* 5164 approaches this species and may fall without with hairs both short and long, some being stellate, bristle-like hairs intermixed. *Leaves* petiolate; blade linear to narrowly oblong, 7-22 mm long, 1.5-7 mm broad, apex broadly acuminate, rounded or truncate and lobed, base rounded or broadly cuneate, both surfaces finely stellate-tomentose with hairs appressed to subspreading (mostly under 0.5 mm long), veins usually strongly impressed above and prominent beneath; petiole 1.5-5 mm long, stellate-tomentose with hairs mostly over 0.5 mm long. *Inflorescence* consisting of 1-flowered, axillary cymes, solitary in axils of leaves; peduncle 2-7 mm long, stellate-tomentose with short hairs; pedicels 2-4 mm long, stellate-tomentose with hairs slightly longer than on peduncle; bracteoles 0 or minute, up to 0.5 mm long. *Calyx* tube about 1.5 mm long, lobes 5-7 mm long, stellate-tomentose without with hairs both short and long, some being up to 0.5 mm long, obscurely appressed hairy in upper part within. *Petals* mauve, pink, oblong-cuneate, about 4 mm long, 2 mm broad, claw about 1.5 mm long, margin inrolled on claw and base of blade, lobed at apex of claw, lobes almost meeting on the ventral surface which bears a ridge (sometimes obscure) between the lobes and is glabrous or microscopically hairy on the ridge. *Stamens* with broadly ovovate, spiraled filaments, nearly 1 mm long, 2 mm broad near apex, with hairs on shoulders, apical connective short; anthers about 5 mm long, overlapping filaments at base, ciliate. *Ovary* densely stellate-tomentose (with rays sometimes over 0.5 mm long), 4 mm long, 4 mm broad near apex, with 5 blunt horns at apex; ovules probably 6 in a cell. *Capsule* densely stellate-pubescent with 5 short, blunt horns about 1 mm long.

Found in sand in the dry southern areas of South West Africa.


This species is described as forming a low bush up to 1 m in diameter, a feature which cannot very well be judged from herbarium specimens. Authentic specimens in herbaria show many slender branches from the base and this may help to identify the species. To date it has been recorded only from the dry southern areas of South West Africa. Closely related species are *H. tomentosa* (see note under that species) and *H. guerkeana*. *H. guerkeana* is recorded from the higher rainfall areas further north and does not show many slender branches from the base.

In the F.S.W.A. two specimens, *De Winter* 3378 and *Dinter* 5164, are mentioned under *H. engleri* as differing somewhat from the typical. *De Winter* 3378 could rather be a form of *H. tomentosa*, while *Dinter* 5164 is nearest *H. minimifolia* (see note under that species).


Suffrutex, branched at base, forming a rounded bush 30-90 cm tall and about 1 m in diam.; branchlets many, slender, long, ascending, the outer decumbent, stellate-tomentose with short and long intermixed hairs. *Stipules* 1.5-3 mm long, linear or linear-subulate, hairs at apex. *Leaves* petiolate; blade linear to narrowly oblong, 7-22 mm long, 1.5-7 mm broad, apex broadly acuminate, rounded or truncate and lobed, base rounded or broadly cuneate, both surfaces finely stellate-tomentose with hairs appressed to subspreading (mostly under 0.5 mm long), veins usually strongly impressed above and prominent beneath; petiole 1.5-5 mm long, stellate-tomentose with hairs mostly over 0.5 mm long. *Inflorescence* consisting of 1-flowered, axillary cymes, solitary in axils of leaves; peduncle 2-7 mm long, stellate-tomentose with short hairs; pedicels 2-4 mm long, stellate-tomentose with hairs slightly longer than on peduncle; bracteoles 0 or minute, up to 0.5 mm long. *Calyx* tube about 1.5 mm long, lobes 5-7 mm long, stellate-tomentose without with hairs both short and long, some being up to 0.5 mm long, obscurely appressed hairy in upper part within. *Petals* mauve, pink, oblong-cuneate, about 4 mm long, 2 mm broad, claw about 1.5 mm long, margin inrolled on claw and base of blade, lobed at apex of claw, lobes almost meeting on the ventral surface which bears a ridge (sometimes obscure) between the lobes and is glabrous or microscopically hairy on the ridge. *Stamens* with broadly ovovate, spiraled filaments, nearly 1 mm long, 2 mm broad near apex, with hairs on shoulders, apical connective short; anthers about 5 mm long, overlapping filaments at base, ciliate. *Ovary* densely stellate-tomentose (with rays sometimes over 0.5 mm long), 4 mm long, 4 mm broad near apex, with 5 blunt horns at apex; ovules probably 6 in a cell. *Capsule* densely stellate-pubescent with 5 short, blunt horns about 1 mm long.


Suffrutex, erect, up to 60 cm tall, with outer branches sprawling in sand, branches with a fairly smooth, stellate tomentum, rarely with a few longer bristle-like hairs intermixed. *Stipules* linear-subulate, 1-3 mm long, at apex. *Leaves* petiolate; blade linear-elliptic to narrowly oblong or oblong-elliptic, acute, rounded or truncate at apex, somewhat
cuneate to rounded at base, finely and thinly stellate-potentomose on both surfaces, entire or toothed in upper half, often folded, 10-25 mm long, 3-8 mm broad; petiole 1.5-4 mm long. Inflorescence of 1-flowered cymes solitary in the axils of the leaves; peduncles 9-20 mm long; pedicels 1-2 mm long, cernuous; bracts 2-5, about 1 mm long, narrowly deltoid-subulate. Calyx about 7 mm long, divided to below middle, densely stellate-pubescent, hairs short from a scaly base. Petals "pink", "reddish" or "plum-coloured", oblong-cuneate, 3 mm long, 1.75 mm broad, margins inrolled in lower, claw-like half with thickened auricles or horns about midway which almost meet on inner face of petal, inner face slightly ridged where blade and claw meet, minutely setose on the ridge, midrib distinct. Stamina with membranous, broadly obovate filaments which are setose on shoulders, about 2 mm long, 1.75 mm broad; anthers about 4-6 mm long, sparsely patently pubescent, overlapping filaments at base. Ovary densely stellate-pubescent (hairs short), 5-lobe, lobes rounded at apex; styles 5, stiff, thread-like, cohering, about 5 mm long. Capsule densely stellate-tomentose, 3-5 mm long, 5-umbonate at apex.

Recorded from Kaokoland, Outjo, Otjiwarongo and Grootsfontein in South West Africa, as well as the northern regions of Botswana. Found on sandy ground.


Suffrutex, lax to bushy, up to 75 cm tall, leafy in lower half, in upper half leaves much reduced; branches sublaxely pubescent with gland-tipped, usually short hairs. Stipules 1.5-5 mm long, on upper bract-like leaves down to 1 mm long. Leaves petiolate; blade narrowly oblong to oblong or ovate-acuminate, 1-6 cm long, 1.5-10 mm broad or in ovate leaves up to 18 mm broad near base, upper bract-like leaves 2-10 mm long, 0.5 mm broad, subulate, stellate-tomentellous on both surfaces, sometimes intermixed with longer, gland-tipped hairs especially along margins, rarely sublaxely stellate-pubescent on both surfaces, petiole 1.5-25 mm long, in upper bract-like leaves about 10 mm long, glandular-pubescent. Inflorescence of 1-flowered, axillary cymes, apparently in long, terminal racemes owing to the marked reduction of upper leaves; peduncle very slender, straight, patent to subpatent, 2-3.5 cm long, glandular-pubescent; pedicel cernuous, sometimes finely pubescent, about 5 mm long. Calyx about 7.5 mm long, obscurely pubescent without, lobed to midway or just beyond. Petals longer than calyx, white to pale pink with a coloured patch ("pink", "red" or "mauve") just below middle, about 17 mm long, 5 mm broad in apical portion and from there narrowing to base, claw about 4 mm long, margins inrolled. Filaments obovate, long-cuneate, mucronate, about 5 mm long; anthers about 4.5 mm long, overlapping filament for almost 1 mm. Ovary stipitate, oblong-obovate; stipe 1.5 mm; styles filiform, about 5-10 mm long, straight. Capsule about 5 mm long and 6 mm diam; near apex, oblong or narrowing slightly towards the stipitate base, pliocre along sutures, not horned.

Found in gorges and dry riverbeds in South West Africa.


Triehansia modesta Ehrenb. in Linnaea 4: 402 (1829).

Type: as above.


H. holubii Burtt Davy, Fl. Transv. 1: 42, 268 (1926). Type: Transvaal, Mara, Schlechter 4613 (K; PRE, photo!; BOL!; Z!) which is one of the syntypes of subvar. brevicornis.

Sulfrutex, appearing annual but often persisting for a few years, flowering early in first year, stems erect, branchlets glabrous; branches ascending or spreading; stems, branches and petioles pubescent with a few gland-tipped hairs and bulbous-based hairs present, scarcely under 2 mm long, spreading, stipe about 2 mm long. Seeds reniform, coriugated and finely granular with tubercles developing.

Found in dry, warm, sandy regions, mostly in open, sparse vegetation, often along roads in dry riverbeds and on old lands. Recorded from Beaufort West in the Cape northwards through the northern Cape, parts of the Orange Free State, Natal and Transvaal and into South West Africa. Also found in Botswana and northwards to Egypt and Arabia.


NATAL.—Lower Umfolozi: Umfolozi Game Reserve, Ross 2026.


From the long list of synonyms and the several varieties and subvarieties described, it is obvious that attempts to circumscribe discrete taxa in this complex have failed. It is noteworthy, for instance, that the type of H. holubii Burtt Davy, Schlechter 4613, is also a syntype of H. modesta var. eliator subvar. brevicornis Engl. (Schlechter 4613 in BOL differs from a specimen with the same number in K in having broader leaves). Much of the variation may be ascribed to hybridization.

A Venda name "Ishitoni sha" is noted on one of the specimens.

I. C. VERDOORN

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H. mildbraedi Dinter & Engl. in Bot. Jb. 39: 590 (1907); M. Friedrich et al. in F.S.W.A. 84: 16 (1969). Type: South West Africa, Okahandja, Dinter s.n. (ZI; PRE, photo: ); K (as No. 487).


Annual, very slender, branched from near base; branches slender, spreading-ascending to arcuate-ascending, subdensely stellate-pubescent, hairs few in a group and of different lengths (± 0,5 mm long). Stipules subulate to linear, acuminate, 1,5-2,5 mm long, rarely up to 5 mm long (often on same plant). Leaves petiolate; blade narrowly to broadly ovate-acuminate, varying much in size on same plant, 10-35 mm long, 3-15 mm broad, rounded, and usually broadest, at base, broadly acuminate to an acute apex, obscurely to clearly serrate, sparsely to subdensely stellate-pubescent on both surfaces, hairs few in a group (sometimes reduced to 2) and of different lengths; petioles 1-4 (-12) mm long. Flowers axillary, solitary, yellow-orange, dull red, brick-red to orange-red, densely stellate-pubescent on both surfaces, hairs few in a group, rarely few in a group (sometimes reduced to 2) and of different lengths; petioles 1-4 (-12) mm long, viscid and with a few glands; bracteoles minute, about 0,5 mm long; pedicels usually glabrous, 2-4 mm long. Calyx about 6 mm long, lobed to middle or just beyond; glabrous and somewhat viscid with minute papillae, lobes deltoid-acuminate with the finely and densely ciliate margins incurved in upper portion. Petals about 1 cm long, "deep wine-red", "red", "brick-red", "mauve" or occasionally clear yellow, oblong-obovate in upper two-thirds, produced into a claw with incurved margins in lower third, glabrous. Stamens adhering to stipe at base, free portion about 7 mm long; filaments hyaline, narrowly obovate, overlapped by anther base about as long as anthers. Ovary minutely papillate, about 1,5 mm long, stipitate; stipe about 1,5 mm long; styles 2,5 mm long. Capsule oblong-globose, about 6 mm long, 5 mm broad, with a 4 mm long stipe at base surrounded by the persistent calyx-tube, 5 pairs of spreading horns at apex, horns glabrous, 0,5-3 mm long.

Found in pockets of soil between rocks on koppies and mountains. Recorded from the northern half of South West Africa. Also in Angola and northwards to Ethiopia and Eritrea.


A range of material from South West Africa has shown that the length of the horns on the capsules may vary considerably, namely from 1,5-3,5 mm. H. mildbraedi, which has been distinguished from H. tigrensis by its longer horns, is therefore not upheld. A Rich in Tent. Fl. Abyss uses the spelling tigrensis, while Hochstetter's list, Masters in F.T.A. and Kew Index give tigrensis. F.Z. retains the original spelling tigrensis, as does F.S.W.A. in the note under H. mildbraedi. It appears that, according to Article 73 G (b) of the Code, it should be H. tigrensis. In Z. Dinter 457 is indicated as the type of H. mildbraedi but there is no evidence to support it.

types: Cape, Winterveld, between Nwujaarsfontein and Ezelsfontein, Drège s.n. (K; PRE, photo: ); Orange River, Burke & Zeyher s.n. (TCD; PRE, photo: ); Somerset, Barber s.n. (PRE!).

H. fasciculata Bak. in Refug. Bot. 5, t. 289 (1873). Type: Cult., originally collected by Cooper in the Cape.

Bushy suffrutex, 15-60 (--100) cm high, usually heavily browsed; stems minutely and densely grey scaly, new growth viscid with minute papillae and occasional stalked glands, otherwise glabrous. Stipules subulate, 0,5-1 mm long, deciduous. Leaves clustered on short, abbreviated shoots, sessile or shortly petiolate; blade varying in length in each cluster, 5 mm to about 12 mm long, very narrowly obovate, plicate, giving the appearance of being linear, microscopically pitted and with minute viscid papillae, otherwise glabrous; petiole 0,5 r up to 3 mm long. Inflorescence of 1-flowered cymes in pseudo-racemes at the ends of the slender, ultimate branchlets; peduncles aborted or 1-3 mm long, viscid and with a few glands; bracteoles minute, about 0,5 mm long; pedicels usually glabrous, 2-4 mm long. Calyx about 6 mm long, lobed to middle or just beyond; glabrous and somewhat viscid with minute papillae, lobes deltoid-acuminate with the finely and densely ciliate margins incurved in upper portion. Petals about 1 cm long, "deep wine-red", "red", "brick-red", "mauve" or occasionally clear yellow, oblong-obovate in upper two-thirds, produced into a claw with incurved margins in lower third, glabrous.

Stamens adhering to stipe at base, free portion about 7 mm long; filaments hyaline, narrowly obovate, overlapped by anther base about as long as anthers. Ovary minutely papillate, about 1,5 mm long, stipitate; stipe about 1,5 mm long; styles 2,5 mm long. Capsule oblong-globose, about 6 mm long, 5 mm broad, with a 4 mm long stipe at base surrounded by the persistent calyx-tube, 5 pairs of spreading horns at apex, horns glabrous, 0,5-3 mm long.

Found among dolerite rocks, on hill slopes in calcareous sandy country and near pans. Recorded from Oudtshoorn and Cradock and Middelburg to the south-western Orange Free State, Christiania in the Transvaal, Kuruman in the northern Cape and in Botswana.


TRANSVAAL.—Christiania: Bloemheuwel, Burtt Davy in Govt. Herb. 11273.

BOTSWANA.—Without exact locality, Holub, s.n. (BOL).

This species is characterized by its clustered, almost needle-like leaves, and by the more usual stellate-pubescence being almost entirely replaced by glutinous scales and papillae which glistin in sunlight and cause the plant to be sticky when crushed. A paste made of the crushed parts is said to be used to close wounds and relieve pain and this accounts for the common name "Pleisterbos". This species is usually referred to as "Rooi Pleisterbos", but since the flower colour varies in the species and can be pure
yellow occasionally, it is not very apt. *H. linearifolia* belongs to the group in which the petals are not strongly twisted.


Suffrutex 30–60 cm high, virgately branched, branches slender, woody at base, stellate-tomentose. *Stipules* subulate or conduplicate, stellate-tomentose, 1.5–5 mm long. *Leaves* petiolar, blade linear-elliptic to narrowly ovate-oblong, densely stellate-tomentose on both surfaces, 16–34 mm long, 4–11 mm broad, ± oblong-cuneate, the margin usually entire, midrib and veins prominent beneath, ± 2 mm long, ± densely stellate-tomentose; peduncle about 3 mm long, ± densely stellate-tomentose with slightly longer hairs than on the peduncle. Calyx about 6 mm long, tube ±3 mm, lobes ±2.5 mm long, shortly stellate-tomentose. *Petals* 'pale' to 'deep pink', about 6–8.5 mm long and 2.5–4.5 mm broad, ± oblong-cuneate, the margin involuted only along the short, 1.5–2.5 mm long, lobes ±1.5 mm long, the latter ±2.5 mm long, shortly stellate-tomentose; pedicule about 5–7 mm long; pedicel 1.5–3.5 mm long. *Capsule* about 6 or 7 mm long, lobed to about middle, stellate-tomentose outside, lobes appressed pubescent within.

*Petals* "pale" to "deep pink", about 6–8.5 mm long, and 2.5–4.5 mm broad, ± oblong-cuneate, the margin involuted only along the short, 1.5–2.5 mm long, lobes ±1.5 mm long. *Stamens* with obliquely conduplicate filaments, ±4 mm long, glabrous, anthers ±4 mm long, overlapping filament for about 1 mm, ciliate. *Ovary* very shortly stipitate, ±2.5 mm long, shortly stellate-tomentose, hairs rather longer at apex; styles about 5 mm long. *Capsule* about 6 mm long, 3 mm diam., shortly and densely stellate-tomentose, eventually shortly horned at sutures, horns about 1.5 mm long.

Found in limy soils. Recorded from the Omarukia, Okahandja and Gobabis districts of South West Africa and eastwards into Botswana.


Suffrutex 30–40 cm tall, stems woody, much branched, with grey bark; branchlets finely stellate-tomentose, hairs short, glutinous. *Stipules* up to 6 mm long, linear-subulate. *Leaves* shortly petiolar; blade narrowly to broadly oblong-obovate, about 3.5×0.7 mm to 30×9 mm, finely, densely and shortly stellate-tomentose (hairs somewhat glutinous), rounded or acute at apex, narrowing slightly to a rounded or cuneate base, margin usually entire, midrib and veins prominent beneath, usually ±2 arising from base, one on each side of the midrib; petiole 1–4 mm long. *Inflorescence* of 1-flowered, axillary cymes; peduncle up to 15 mm long, shortly stellate-tomentose, 2–4 bracteate at apex; pedicels 2–3 mm long, stellate-tomentose with slightly longer hairs than on the peduncle. *Calyx* about 6 mm long, tube ±3.5 mm, lobes ±2.5 mm long, shortly stellate-tomentose, hairs rather longer at apex; styles about 5.3 mm long. *Capsule* about 6 mm long, 3 mm diam., shortly and densely stellate-tomentose, eventually shortly horned at sutures, horns about 1.5 mm long.

Found in sandy flats near Garies and on granite slopes in the Omarukia, Karibib and Okahandja, districts of South West Africa, and in Namaqualand, Cape.


*Botswana.—60 km N.W. of Serowe, *Wild & Drummond* 7203*.

Characterized by the short calyx lobes, the 5 prominent ribs on the calyx (outside), the fine, short, stellate-tomentum, the three prominent basal nerves on the undersurface of the leaves and the stellate-tomentose capsule with very short horns.
tomentose with short, greyish white hairs. *Stipules* 0.75–2 mm long, thick in texture and densely stellate-tomentose with short greyish white hairs, sometimes caducous. *Leaves* shortly petiolate; blade rather thick in texture and densely stellate-tomentose with short grey hairs, variable in shape and size, elliptic-cuneate to obovate—or obov-cuneate, broadest just above middle or at the apex, about 7 to 20 mm long, margin entire or crenate at the apex, base cruneate or sub-rounded, apex broadly acuminate or truncate and often shallowly 3-lobed; petiole often folded trough-shaped, 1–5 mm long, rather thick in texture and densely stellate-tomentose with short hairs. *Inflorescence* of 1-flowered cymes, solitary in axils of leaves, upper subtending leaves sometimes much reduced in size giving the appearance of racemes; pedicules 2.5–6 mm long, densely stellate-tomentose with short hairs; pedicels 3–5 mm long, distinguishable from the peduncle by the coarser stellate pubescence, hairs over 0.5 mm long; bracts minute or wanting. *Calyx* lobed almost to base, stellate-pubescent with hairs rather long (0.5–1 mm), tube 1,5–3 mm long, lobes 4.5–7 mm long. *Petals pink*; “purplish” or “violet”, 6.5–9 mm long, 2.5–6 mm broad; blade narrowly oblong to suborbicular, narrowing slightly into a claw in lower third, margins sometimes minutely ciliate, glabrous within, claw with slightly inrolled margins. *Stamens* with hyaline, obovate filaments which either narrow gradually or abruptly to apex and base and are glabrous or setose on shoulders; anthers 3.5–5 mm long, ciliate with sparse, short hairs, overlapped filament for 1.5 mm. *Ovary* about 2.5 mm long, 2 mm diam. with short papilllose hairs on surfaces and setose or stellate along sutures and at apex; stipe 1.5 mm long; styles 5 mm long, slender, erect, exserted from the closed mature flower for about 2 mm. *Capsule* about 5 mm long, usually hidden in the persistent calyx and petals, obscurely 5-angled, surface papillose, sutures setose and stellate with a blunt lobe or a semi-orbicular blade with or without a ciliate margin, while the filaments which are broadest near the apex, either narrow gradually to base and apex or narrow abruptly and so may be taken to be somewhat cruciform.

Drège 3279, the type of var. *dentata*, is also the type of the nomen nudum *H. racemosa* E. Mey. in Dèège, *Zwei Pfl. Doc.* 192 (1843). Specimens of *M. Schlechter* s.n. from Schakalwater in Z and LE bear the name *H. maximiliiana* Schltr. *n. sp.* In Z and PRE there are specimens of *Dinter* 6039 named *H. kurtiana* Schinz. This name was never published. The specimen is *H. gariepiana*. Specimens of *Schlechter* 11374 in LE and Z bear the name *H. conaclanda* K. Schum. which was evidently also not published. It too, is *H. gariepiana*. The common name “Koerkassie” is recorded by Dumoulin.


Suffrutescent, leafy, dwarf bush, many-stemmed, about 20 cm tall, much branched from base, the whole plant grey stellate-tomentose, part of branchlets obviously lineate. *Stipules* 1–2.5 mm long, rather thick and persistent, stellate-tomentose and with a few long hairs at apex. *Leaves* petiolate; blade narrowly to broadly oblong-cuneate, sometimes broadest at apex, from about 5 x 2 mm to 20 x 10 mm, stellate-tomentose on both surfaces; coarsely crenate in upper half or at apex only, cuneate portion entire; petiole 2–10 mm long, grey stellate-tomentose. *Inflorescence* of 1-flowered, axillary cymes, usually for whole length of the branchlet; peduncle 2–5 mm long, persistent but not indurated and spine-like; pedicels about 3 mm long, curved, slightly thicker and with denser tomentum than on peduncle. *Calyx* lobed to just beyond middle, stellate-pubescent to stellate-tomentose outside, lobes sparsely appressed pubescent within, tube 2–3 mm long, lobes 2.5–3.5 mm long. *Petals* “pink”, about 8 mm long, narrowly oblong, somewhat cuneate at base, margin narrowly inrolled in cuneate basal part, thin-textured, not thickened in centre, glabrous in specimens dissected. *Stamens* united at base around stipe; filaments narrowly ovovate, hyaline, pubescent on shoulders, about 3 mm long; anthers 4 mm long, pointed, ciliate. *Ovary* with a 1.5 mm long stipe, subglobose, about 1 mm long, with 10 broad, stipitate, papillose and stellate-pubescent on surface, setose along sutures; ovules about 14. *Capsule* about 3 mm long, 3 mm broad, stipitate, papillose and stellate-pubescent on surface, setose along sutures, with 10 long, spreading to recurved setose or pilose horns 4–10 mm long.

Found on the edge of the Namib in semi-desert conditions. Recorded from Lüderitz District northwards to Welwitschia in South West Africa.


Characteristically a small, rounded, entirely grey stellate-tomentose bush about 20 cm tall, branched from the base with slender branches. The leaves are coarsely crenate in the upper half and the ten horns on the capsule are long, pilose and spreading to recurved.

In F.S.W.A. this species is put in synonym under *H. affinis*, a species which it resembles closely and which differs mainly in being a low bushy plant branched from the base, with branchlets which become less readily indurated and spine-like.

A specimen in BOL, *Miss W. Tucker* s.n., from the sand dunes south of Doornpoort, may be *H. complicata*, but the material is not sufficient for identification.
25. Hermannia trifurca L., Amoen. Acad. 6, 90 (1760); Sp. Pl. ed. 2: 942 (1763), as trifurcata; Syst. Veg. 610 (1784); Cav., Diss. t. 178, fig. 2 (1788), as trifurcata; Jacq., Schoenbr. t. 125 (1797); DC., Prodr. 1: 495 (1824), as trifurcata; Thunb., Fl. Cap. ed. Schult. 503 (1823); Harv. in F. C. 1: 205 (1860), as trifurcata. Type: “Cap. b. Spei”, Linn. Herb. Cat. No. 854 (LINN, holo.; PRE, photo.).


Suffrutex, erect, woody, much branched, ultimate branchlets becoming indurated and spiky; branchlets scaly to minutely stellate-scaly, ridged in part. Stipules subulate to linear acute, 1.5-2.5 mm long. Leaves sessile or shortly petiolate, clustered on abbreviated shoots; blade linear to linear-cuneate, varying in size in each cluster, 6-25 mm long, 1.5-5 mm broad, rounded, acute or truncate at apex and often 3-toothed, densely to sparsely pubescent with, usually, minute stellate hairs, rays appressed and short, rarely long, margins entire, rarely toothed below truncate apex. Inflorescence of 1-flowered cymes in the axils of upper leaves or arranged in fairly long terminal (pseudo-)racemes, flowers cernuous and second; peduncle usually 3-5 mm long when peduncle is not obvious, otherwise ranging from 1.5-4 mm, stellate-pubescent. Calyx 6-8 mm long, lobed to just beyond middle, sublaxly stellate-pubescent, usually denser in lower portion, the hairs short or long, lobes densely ciliate with tufted hairs. Petals “mauve”, “purple”, “pink to wine-red”, 7-11 mm long, 2-3 mm broad, oblong-cuneate, narrowly inrolled along margin in lower half. Stamens 7-8 mm long; filaments hyaline, obovate-obovate to narrowly oblong-cuneate, apparently glabrous, adhering at base to stipe; anthers ciliate, 4-5 mm long with the base overlapping the dilated filament. Ovary stipitate, 5-lobed, scaly and papillose, papillae longer on keels of lobes, about 1.5 mm long; stipe about 1.5 mm long when peduncle is not obvious, otherwise ranging from 1.5-4 mm, stellate-pubescent. Capsule 5-lobed, about 7 mm long, 6 mm broad, stipitate at base, apex with 5 pairs of spreading horns, keel of lobes and horns villous; stipe about 2 mm long; horns at first short, eventually up to 5 mm long.

Found from Worcester in the western Cape northwards through Namaqualand to the Klingshardt Mountains in South West Africa.


S.W.A.—Lüderitz: Klingshardtberge, Spitzkuppe Sud, Watmough 881.

This woody much branched shrub is characterized by the linear leaves which are usually 3-toothed at the apex, although sometimes very shallowly so, and the drooping, bell-shaped flowers secund towards the apices of the branchlets. The petals are reminiscent of flies’ wings and fold together to give a truncate appearance to the flower. Often the filiform styles are short and exerted. The short, broad, 5-lobed capsules, partly concealed by the persistent perianth, are made conspicuous by the pairs of pilose horns spreading horizontally from the apices of the lobes.

A common Hottentot name for this species is “Koerhassie”.

With regard to the epithet “trifurca”, not only did Linnaeus use it in the original description but, according to Latin scholars, it is more correct than “trifurcata” (private letter to N. S. Pillans from Capt. Salter).


H. squarrosa Dinter ex Range in Repr. nov. Spec. Regni veg. 36: 262 (1934), nom. nud. based on Dinter 6040 (Z; PRE, photo.); PRE!; SAM!

Suffrutex, with woody stems and branches, branchlets varying in colour from pale yellow, metallic, cinnamon-brown to plum-coloured, thick and squashy to slender and virgate but all with ultimate branchlets becoming bare, indurated and spine-like (the persistent peduncles usually not indurating as in H. spinosa), at first minutely glandular hairy, covered by dense stellate pubescence which, at least on some twigs, is cinnamon-coloured and appears powdery, rarely with some gland-tipped hairs as well. Stipules 1.5-3 mm long, persistent, tomentose and with a few long hairs at apex. Leaves petiolate; blade usually oblong-cuneate, sometimes ovate, but shallowly lobed in upper half, some leaves entire, often broadest at apex, 8-30 mm long, 4-15 mm broad at centre or near apex, densely stellate-tomentose, stellate hairs from a scaly base; petiole 3-6 mm long, tomentose. Inflorescence of 1-flowered, axillary cymes; peduncle 3-4 mm long, pedicel 1.5-4.5 mm long; bracts at apex of peduncle small, 0.5 mm long. Calyx 7-10 mm long, lobed to beyond middle, tube 3 mm long, lobes 7 mm long, stellate-tomentose without, sparsely pubescent within, ciliate. Petals in shades of red and purple, about 9 mm long, 2-3 mm broad, oblong-cuneate, narrowly inrolled along margin in lower half. Stamens with hyaline, obovate filaments, sparsely hairy on shoulders, anthers ciliate, overlapping filaments at base. Capsule 7 mm long, glandular and sometimes also stellate-pubescent on surface, setose along sutures; horns spreading to recurved, pilose, about 8 mm long.

Found on rocky hills and slopes, on quartzite outcrops, sandy shale cliffs, or in gravelly soils. Recorded from the northern Cape (Griqualand West) from Prieska and Kenhardt northwards into Botswana and South West Africa.

CAPE.—Barkly West: Danielskuil, Acocks 257, Hay: near Griquatown, Leisner 891; Lovedale, Acocks 1764, Herbert:


Characterized by the usually stellate-tomentose leaves, the indurating branchlets, and the long, pilose horns on the capsules. H. affinis, as defined here, varies considerably, but it can, nevertheless, be recognized as a species and distinguished from other related species. The two species with which it has been very generally confused are H. spinosa and H. helianthemum. From H. spinosa it can be distinguished, among other details, by the branchlets being stellate-tomentose and becoming indurated or spiny-like, whereas in H. spinosa the branchlets are sparsely stellate-pubescent or glabrous and it is usually the persistent, enlarged peduncles which become spike-like. H. helianthemum, considerably from H. affinis, for it has long, slender branchlets which do not become indurated but terminate in raceme-like inflorescences.

In F.S.W.A. H. complicata Engl. is placed in synonymy under H. affinis, a species to which it is certainly very close, and from which it differs mainly in habit and habitat, being a low, bushy plant confined to the edge of the Namib.

The following insufficiently known species may also be synonymously with H. affinis: H. arenicola Engl.; H. longicornuta Engl. and the unpublished H. schumannii Schinz based on Dinter 4856 (Z!; PRE, photo.).


Suffrutex, virgate, 40–60 cm tall, stems with grey or brown bark, branches becoming woody and leafless, often glutinous, with numerous minute papillae, other details, by the branchlets being stellate-tomentose and with gland-tipped hairs, usually a few pointed hairs at apex, persistent. Stipules terete, blunt, usually just under 1 mm long, papillose. Leaves shortly petiolate; blade oblong-cuneate, 5–10 mm long, 3–8 mm broad, broadest at or near apex, dentate in upper part, teeth usually thickened with glands, upper and lower surface papillose and sparsely stellate-pubescent (hairs appressed). Petiole prominent beneath; petiole 1–3 mm long. Inflorescence of 1-flowered, solitary cymes, usually in axes of leaves on short congested shoots; peduncle usually very short, about 1.5 mm long (rarely on same plant one up to 2.5 mm long), glabrous; pedicels up to 5 mm long, papillose and sparsely stellate-pubescent, thickening towards apex; bracts minute, ±0.5 mm. Calyx usually lobed to beyond the middle, 4–6 mm long, obscurely papillose with a few appressed stellate hairs without, ciliate on margin and pubescent on inner face. Petals broadly oblong-cuneate, about 8 mm long, 4 mm broad near apex, claw with narrowly inrolled margin, not thickened, appearing glabrous. Stamens with otrulate, hyaline filaments (appearing glabrous), about 3 mm long; anthers 3, ciliate. Ovary densely hispid, stipitate (stipe ±1,25 mm), about 1.5 mm long; styles about 4 mm long. Capsule from about 4–5 mm long, with 5 laterally compressed carpels, 2.5 mm broad, papillose on surfaces, sometimes sparsely stellate-pubescent too, setose along sutures, with 10 diverging, pilose horns which are up to 8 mm long.

Broken veld, on shaly, quartz or granite hills and plateaux or frequently in water-courses. Recorded from the Gordonia District in the Cape, near the South West Africa border and in the Keetmanshoop, Gibeon and Bethanien Districts of South West Africa.

CAPE.—Gordonia: Rietfontein, Werderrmann & Oberdieck 2253.

S.W.A.—Bethanien: Aus, Walter 2616 (WIND); Helmeringhausen, Dinter 8028; Bersaba–Bethanien, Schenk 361; Dassiesfontein–Inachab, Pearson 7905. Gibeon: Mariental, Basson 151. Keetmanshoop: Keetmanshoop, Acocks 15619A; Hoachabeb, Pearson 7905 (BOL!).

Distinguishing features are: abbreviated, slender, congested shoots bearing small, persistent bracts in lower half, and leaves and flowers above; long, indurated branchlets, minutely papillose (not stellate-pubescent) becoming glutinous; peduncle short, persistent; pedicels longer and stellate-pubescent; petals longer than calyx, margins inrolled on claw, not thickened, glabrous on inner face; capsule with five laterally compressed carpels free to the axis; horns 10 long, pilose, spreading and recurved.


Mahernia spinosa Burch. ex DC., Prodr. 1: 497 (1824). Type: Cape, Dwaal River, Burchell s.n. (K, holotype; PRE, photo.).


Suffrutex, 20–40 cm tall, usually a rounded bush, with wiry stems and branches, young branchlets sparsely stellate-pubescent with short hairs, glabrescent, usually metallic coloured and pubescent, armed with persistent indurated spiny-like peduncles. Stipules 1–2.5 mm long, rather thick and sometimes hooked, stellate-pubescent and with gland-tipped hairs, usually a few pointed hairs at apex, persistent. Leaves petiolate; blade oblong-cuneate to narrowly so, coarsely toothed in upper half or at broad apex only, or elliptic and entire (both shapes often on the same plant), 4–20 mm long, 2.5–7 mm broad, minutely papilate and stellate-pubescent on both surfaces, usually sparsely so, hairs short from a central scale, radiating and appressed to surface of the leaf; petiole 2–5 mm long, sparsely stellate-pubescent and with a few additional glandular hairs or papillae. Inflorescence of 1-flowered, axillary cymes; peduncles at first short, about 2–4 mm long, persistent, glabrescent, becoming indurated and elongating to about 8 mm, rarely longer, more or less patently spreading, appearing spiny but apex blunt; pedicels about 2–5 mm long, nodding, stellate-pubescent, deciduous. Calyx from about 5 mm to 7 mm long, lobed to just beyond middle, minutely glandular and laxly stellate-pubescent outside, lobes sparsely appressed hairy on inner face. Petals “wine-red”, “purple-mauve”, “rose-red”, “rose-pink”, “red”, “purple-mauve”, “rose-red”, “rose-pink”, “red”
“brick-red”, oblong-cuneate, 7–10 mm long, margin inrolled on claw only, apparently glabrous on inner face (or reddish papillae in a patch). *Stamens* with many rows of yellowish filaments, joined around a thin, free portion 2–3.5 mm long, pubescent on shoulders which are only slightly wider than the overlapping anther bases; anthers 4–5 mm long, ciliate. *Capsule* up to 1 cm long, papillose between stellates, stellate with long hairs or setae on horns; horns ultimately divergent and recurved, up to 8 mm long, pilose; seeds about 7 developed in each cell. Figs 2.2 & 2.6.

Found in karroid veld and on stony koppies in the western Cape from Prince Albert northwards to Gordonia and from Warmbad northwards to Rehoboth in South West Africa.


**H. proantensis** Eckl. & Zeyh., Enum. 41, No. 327 (1834). Type: Cape, Caledon, near mouth of “Klynnrivier,” Ecklen & Zeyher Enum. No. 327 (S; PRE, photo.; SAM!; PRE!).

**H. disermifolia** sensu Eckl. & Zeyh., Enum. 41, No. 325 (1834), based on specimen from between “Breederivier and Duivenhoksrivier” (S; PRE, photo.;), non Jacq.

**H. collina** Eckl. & Zeyh., Enum. 41, No. 326. Type: Cape, near “Langehoogte and Pot en Klynnrivier”, Ecklen & Zeyher Enum. No. 326 (S; PRE, photo.).

**H. argyraea** Presl, Bot. Bemerk. 20 (1844). Type: Cape, between Cape Agulhas and Potberg, Drège 7303 (K; PRE, photo.; PRE!; W!).

**H. decumbens** var. *hispida* Harv., in F.C. 1: 185 (1820). Type as for *H. decumbens* Willd., specimen in the greenhouse of the University of Cape Town, near Milnerton, Harv. in F.C. 1: 185 (1820).

Suffrutex, stems several from the taproot, slender, decumbent, with ascending, secund branches, stem and branches terminating in an inflorescence, bright green, striate in dried specimens, glabrous or very sparsely stellate-hairy with rays few, long and pointed; internodes 3–40 mm long, sometimes longer. *Stipules* leaf-like, about half as long as leaves, 4–12 mm long, linear, usually broad at base, often sparsely ciliate like the leaves, with distinct, pointed hairs. *Leaves* subsessile, appearing linear but, tapering into a petiole-like base, often acicular, 13–30 mm long, apex acute or broad and lobed, margins often sparsely ciliate with long, pointed, bulbous-based hairs. *Inflorescence* of 1-flowered cymes arranged in terminal racemose cymes. *Calyx* about 6 mm long, lobed to about midway, sparsely stellate-hairy especially on margins and veins, rays long and pointed, very few or solitary from a bulbus base, glabrescent; lobes deltoid with acute to acuminate apex. *Petals* yellow or “orange-yellow”, glabrous, about 9 mm long, upper third or half oblong-orbicular, narrowed towards base with infolded margins. *Stamens* about 6 mm long; filaments yellowish, oblong, somewhat cuneate, with hairs on shoulders, united around short stipe; anthers about 3.5 mm long, overlapping the filament for 1 mm, ciliate, hairs acutest. *Ovary* 2.5 mm long, 5-lobed, narrowing towards base, stellate-hairy in upper half, especially among sutures; stipe 1 mm long; styles 5 mm long, cohering, hairy in basal third. *Capsule* more or less globose, bluntly 5-umbonate at apex and with a 1.5 mm long stipe.

Recorded from the Peninsula and northwards from the Malmsbury and Piketberg Districts in the Cape. Found in coastal Fynbos on sandy flats and dunes.


When investigating *H. linifolia* in the sense of Harvey in Flora Capensis (1: 195, 1860), it was found that the description and specimens cited did not agree with the type of the species but rather with a variety of *H. filifolia*. Burman’s type of the species agreed instead with that of *H. scoparia* (Eckl. & Zeyh.). Harv. based on *Mahernia scoparia* Eckl. & Zeyh. Further study of the species shows that *M. scoparia* var. *glabra* Eckl. & Zeyher is merely a glabrescent form of the species and is hardly worthy of any taxonomic rank.

**H. linifolia** Burm. f. is characterized by the very sparse, few-rayed, stellate hairs on the branches and the long-pointed hairs on the margins of the leaves and the calyx, which arise singly or in tufts from a bulbous base. It is a bright green, low, slender-stemmed, procumbent plant with more or less linear leaves and leaf-like stipules which are almost as long as the leaves.
long, matted, often grey hairs, glabrescent at least on surfaces; sometimes entire, stellate-pubescent with short, or long and matted hairs, often glabrescent at least on surfaces; petiole 4-15 mm long, stellate-pubescent with hairs short or long and matted, rarely gland-tipped hairs present; lateral branchlets second, sub-erect and terminating in an inflorescence. Stipules narrowly to broadly ovate, acute to abruptly acuminate, base usually broad, oblique, rounded or cordate, semi-amplexicaul and sometimes decurrent, 3-10 mm long and about as broad at base, finely stellate-pubescent above and below, sometimes also hirsute with long, pointed hairs. Leaves petiolate; blade more or less oblong to ovate-oblong, usually broadest below the middle, slightly cuneate at base, 10-70 mm long, 7-34 mm broad, upper surface finely pubescent with stellate hairs and fringed scales, glabrescent, lower surface thinly and finely white-tomentose (sometimes not obviously white) between nerves, and stellate-pubescent on raised nerves; crenate-dentate and plicate at least when young; petiole 5-20 mm long, densely pubescent either with fringed scales or tufted, pointed hairs, or both. Inflorescence of erect, leafless, racemose or paniculate cymes which terminate main branch and branchlets; peduncles and pedicels pubescent as on bracts; bracts more or less like the stipules, when in groups 3 the central one elliptic, in upper parts of inflorescence united and lobed, often 3-lobed. Calyx shallowly campanulate, finely stellate-pubescent to tomentose without, about 4,5 mm long, 5-lobed almost to middle, sinuses wide, lobes acute. Petals twisted, "rich yellow", about 9 mm long, more or less oblong, narrowed at middle and eared, margins half inrolled, pointed in upper parts, cuneate at base, 10-70 mm long, about 4,5 mm long, 5-angled, stellate-pubescent. Capsule enclosed in persistent calyx and petals, 5-angled, stellate-pubescent.

Found principally in Coastal Fynbos, in dune bush, on undulating hills and in river plains, in sand or on shaly ground. Recorded from the Cape, from the Peninsula and northwards to Mamre Road and northwards to beyond Calvinia and eastwards to the Caledon District eastwards along the coast to Knysna, with a few records in valleys farther inland.


This species is characterized by the consistently decumbent habit, the practically leafless, ascending inflorescence with clustered flowers, and the hairs on the calyx and parts of the inflorescence which are longer and more obvious than on most other parts of the plant. It is nearest to H. althaeifolia, having the same semi-inflated calyx and large stipules, but it can be distinguished by the more or less leafless inflorescence with long, spreading, matted pubescence on the calyx and the usually glabrescent stipules. The areas of distribution are adjacent but do not overlap. H. althaeifolia is recorded from the Peninsula and northwards to beyond Calvinia and eastwards to Uniondale and northern Mossel Bay; it is generally found just to the north of the Coastal Fynbos in which H. decumbens occurs.

Ecklon & Zeyher 324 (SI; SAMI), the type of H. diversifolia Eckl. & Zeyh. (see note under H. althaeifolia) seems to be a form or hybrid of this species.

It is cited in F.C. as a synonym of H. althaeifolia.

31. Hermannia prismatocarpa E. Mey. ex Harv. in F.C. 1: 186 (1860); E. Mey. in Drège, Zwei Pl. Doc. 103 & 192, nomen (1843); Adamson & Salter, Fl. Cape Pennins. 584 (1950); Verdoorn in Flower. Pl. Afr. 41, t. 1628 (1971). Type: Cape, Riebeekskasteel, Drège s.n. (S, lecto, photo; TCD; LE!).

H. hirsuta sensu Eckl. & Zeyh., Enum. 43, No. 339 (1834), (in S) non Schrad.

H. rugosa Adamson in J.S. Afr. Bot. 10: 123 (1944), partly as to Bols 12619 (BOL; PRE!); Pillans 4761 (BOL; PRE!); Gillert 4162 (BOL; PRE!).

Suffrutex, branching from base, branches long, decumbent, terminating in leafless, ascending inflorescence, up to 60 cm long, laxly to densely pubescent with minute fringed scales or papillae, interspersed with long, bulbous-based hairs, rarely gland-tipped hairs present; lateral branchlets second, sub-erect and terminating in an inflorescence. Stipules narrowly to broadly ovate, acute to abruptly acuminate, base usually broad, oblique, rounded or cordate, semi-amplexicaul and sometimes decurrent, 3-10 mm long and about as broad at base, finely stellate-pubescent above and below, sometimes also hirsute with long, pointed hairs. Leaves petiolate; blade more or less oblong to ovate-oblong, usually broadest below the middle, slightly cuneate at base, 10-70 mm long, 7-34 mm broad, upper surface finely pubescent with stellate hairs and fringed scales, glabrescent, lower surface thinly and finely white-tomentose (sometimes not obviously white) between nerves, and stellate-pubescent on raised nerves; crenate-dentate and plicate at least when young; petiole 5-20 mm long, densely pubescent either with fringed scales or tufted, pointed hairs, or both. Inflorescence of erect, leafless, racemose or paniculate cymes which terminate main branch and branchlets; peduncles and pedicels pubescent as on bracts; bracts more or less like the stipules, when in groups 3 the central one elliptic, in upper parts of inflorescence united and lobed, often 3-lobed. Calyx shallowly campanulate, finely stellate-pubescent to tomentose without, about 4,5 mm long, 5-lobed almost to middle, sinuses wide, lobes acute. Petals twisted, "rich yellow", about 9 mm long, more or less oblong, narrowed at middle and eared, margins half inrolled, pointed in upper parts, cuneate at base, 10-70 mm long, about 4,5 mm long, 5-angled, stellate-pubescent. Capsule enclosed in persistent calyx and petals, 5-angled, stellate-pubescent.

Found principally in Coastal Fynbos, in dune bush, on undulating hills and in river plains, in sand or on shaly ground. Recorded from the Cape, from the Peninsula and northwards to Mamre Road and northwards to beyond Calvinia and eastwards to the Caledon District eastwards along the coast to Knysna, with a few records in valleys farther inland.


This species is characterized by the consistently decumbent habit, the practically leafless, ascending inflorescence with clustered flowers, and the hairs on the calyx and parts of the inflorescence which are longer and more obvious than on most other parts of the plant. It is nearest to H. althaeifolia, having the same semi-inflated calyx and large stipules, but it can be distinguished by the more or less leafless inflorescence with long, spreading, matted pubescence on the calyx and the usually glabrescent stipules. The areas of distribution are adjacent but do not overlap. H. althaeifolia is recorded from the Peninsula and northwards to beyond Calvinia and eastwards to Uniondale and northern Mossel Bay; it is generally found just to the north of the Coastal Fynbos in which H. decumbens occurs.

Ecklon & Zeyher 324 (SI; SAMI), the type of H. diversifolia Eckl. & Zeyh. (see note under H. althaeifolia) seems to be a form or hybrid of this species.

It is cited in F.C. as a synonym of H. althaeifolia.
What appears to be a form or hybrid of this species was collected south of Vanrhynsdorp near the bridge over Doring River on the way to Clanwilliam (De Winter & Verdoorn 9034 & 9035). The plants were somewhat smaller in all parts and the branches, although spreading, were not trailing on the ground. In all other respects they agreed with *H. prismatocarpa*. This needs further investigation.

32. *Hermannia scordifolia* Jacq., Hort. Schoenbr. 1: 64, t. 120 (1797); Reichb., l.c. Descr. Pl. Cult., t. 58, fig. 1 (1923); DC., Prodr. 1: 494 (1824); Harv. in FC. 1: 187 (1860), partly, excl. syn. Iconotype: Jacq. Hort. Schoenbr. 1, t. 120 (no specimen of actual plant figured can be traced).

*H. scordifolia* Jacq. var. integrissula Harv. l.c. (1860). Synotypes: Cape, Brandenburg, Zeyher 117 (PRE; Z; LE; W); Cape, Ebenekker, Olifants River, Drège 7289 (7298 sphalhm. in F); W. Epiphyllum, branchlets subherbaceous, secund, ascending, striate, appearing smooth but often pubescent with Zeyher pressed, lower surface whitish stellate-tomentose, minutely stellate-pubescent, glabrescent, nerves im­pressed, lower surface whitish stellate-tomentose, sometimes thinly so, nerves prominent, margins shallowly to deeply crenate, sometimes lobate-crenate; petiole 3–20 mm long, stellate-pubescent, densely so in contrast to the subglabrous branches. *Inflorescence* ascending, terminal on branches and branchlets, forming lax paniculate or racemose cymes; peduncles 10–60 mm long; bracts united, about 4 mm long, bracteoles filiform or narrowly lanceolate, 1–5 mm long, all caducous; pedicels 3–6 mm long, glabrous, stellate-pubescent or with some tufted hairs, sometimes gland-tipped hairs are present. *Calyx* 6–8 mm long, lobed to about midway, finely stellate-pubescent, the rays long or short and with black, gland-tipped hairs intermixed, lobes triangular, sinuses fairly wide. *Petals* yellow, fading orange, 8–10 mm long, upper portion suborbicular, narrowed just above middle into a claw with inrolled margins which are obscurely ciliate. *Stamens* about 7 mm long; filaments hyaline, oblong-cuneate, 4,5 mm long; anthers ciliate, 3,5 mm long, overlapping filaments and base. *Ovary* 2,5 mm long, stellate-pubescent, especially densely at apex where hairs are longer; stipe 1 mm long; styles 4,5 mm long, minutely and sparsely hairy in lower portion. *Capsule* subglobose, exserted from persistent calyx, 5-lobed, shortly S-umboned, finely stellate-pubescent, more coarsely so on keel of lobes, up to 7 mm long.

*H. scordifolia* is characterized by the long, smooth-looking, bright green, decumbent branches with terminal, ascending, leafless inflorescences and lateral branches which are ascending and also terminate in an inflorescence. The leaves, on fairly long petioles, vary considerably in shape but are all somewhat dis­colorous.

*H. fistulosa* Eckl. & Zeyh., based on *Ecklon & Zeyher* Enum. No. 330 (S; PRE, photo!), appears to be a luxuriant form of *H. scordifolia* and is not here upheld as a separate species. *Bachmann* 2121 (Z!) seems to be intermediate between *Ecklon & Zeyher* Enum. No. 330 and *H. scordifolia*.

33. *Hermannia ternifolia* Presl ex Harv. in F.C. 1: 197 (1860); *H. ternifolia* Presl, Bot. Bemerk. 22 (1844), nomen. Type: Cape, between “Groenkloof and Saldana Bay”, Drège s.n. (S; PRE, photo.).

Suffrutex, erect to sprawling, branches slender with small but prominent leaf-bases, densely covered with fringed scales, in parts finely tomentose as well. *Stipules* linear to filiform from a broad base, small, about 7 mm long; filaments hyaline, for most of length below. *Stamens* about 7 mm long, inflated, oblong to subglobose, somewhat 5-angled, squamosule with minute fringed scales, lobed to about one-third of its length; lobes broadly ovate, mucronulate; sinuses narrow. *Petals* about 13 mm long, strongly convolute, apical portion spreading to recurved; limb oblong-ovabate, about 6 mm long, narrowing abruptly into a claw about 7 mm long, scaly-stellate on sides above and with infolded margins for most of length below. *Stamens* with oblong hyaline filaments about 5 mm long; anthers 3 mm long, minutely ciliate. *Ovary* with a very short, 0,5 mm long) stipe, 3,5 mm long, somewhat 5-angled, tomentose with short stellate hairs except at apex where hairs are slightly longer; styles cohering, 5 mm long.

Found in coastal scrub, in sand or on limestone, up to a few miles inland. Recorded from Saldanha Bay and the Peninsula eastwards along the coast to Bredasdorp in the Cape Province.

*H. scordifolia*.—Bredasdorp: Bredasdorp, Taylor 4037; Strand Kloof, Compton 14752; Buffelskraal, Van Breda 845; Caledon: Hawston, Marloth 9194; Rooi Els, Leighton 1456, 2106; Gansbaai, Gillett 4268. Malmesbury: between Groenekloof and Saldana Bay, Drège s.n. (PRE, photo!). Peninsula: Pringle Bay, Boucher 618; ‘*Boos’ Hangtown Nature Reserve, Taylor 5953; Swartklip, Leighton 1770.

Characterized by the petioled leaves, the inflated calyx with broadly rounded, shortly acute lobes which are often incurved, and the pubescence of minute fringed scales.

Adamson in Adamson & Salter Fl. Cape Penins., p. 586, mentions that this species cannot be separated from *H. trifoliata* L. With the adequate material now available, these species can be readily distinguished.

34. *Hermannia trifoliata* L., Sp. Pl. 674 (1753); Mant. Alt. 431 (1771); Cav., Diss. t. 182, fig. 1 (1788); DC., Prodr. 1: 494 (1824); Harv. in F.C. 1: 198 (1860); Adamson in Adamson & Salter, Fl. Cape

H. imbricata Eckl. & Zeyh., Enum. No. 381 (1834). Type: Cape, Paardekoppie near Pletttenberg Bay. Ecklon & Zeyher Enum. No. 381 (S; PRE, photo.; TCD; PRE!).

Suffrutex, usually under 30 cm tall, often sprawling, stems and branches stellate-tomentose, ridged or quadrate, leafy in upper portion right to apex, stipules and leaves imbricate. Stipules oblong, short-cuneate, stellate-tomentose with fringed crag-like scales, often 2-veined, 5–8 mm long, 2–3 mm broad in upper half. Leaves thickly tomentose with fringed crag-like scales, sessile or subsessile, obovate-cuneate, slightly longer than the subtending stipules, 7–10 mm long, 4.5–5 mm broad at apex, usually folded, apex broadly rounded to truncate, sometimes crenate. Inflorescence of cymes in terminal heads, usually nodding and surrounded by stipules and leaves; pedicels 0–2 mm long, with reddish brown fringed scales. Calyx about 7 mm long, lobed in upper third, becoming somewhat inflated, covered with small crag-like fringed scales, hairs very short, lobes erect or inflexed, rather broad, mucronate, sinuses fairly narrow. Petals "red", "orange" or "claret-red", twisted, with upper portion slightly narrowing towards base, nerves brown;

Found in Fynbos and Dune Bush and sometimes on limestone ridges or chalk hills near the sea. Recorded along the coast from Bredasdorp to Riversdale.

CAPE.—Bredasdorp: Cape "Between Aghullas & Potberg"; Drège specimen is numbered 7275, but a specimen in W bearing this number and no name is H. trifoliata. A specimen of H. trifoliata has been identified by Drège, specimen is numbered 7275, but a specimen in W bearing this number and no name is H. trifoliata. Gatherings in LE and PRE with the same number are H. trifoliata.


Suffrutex, 15–90 cm tall, branching from base; branches ascending, leaves and stipules usually neatly arranged in ranks (imbricate), pubescent or sparsely so, consisting of minute fringed scales or stellate hairs, grouped hairs from a tubercled base also sometimes present. Stipules green, subcoriaceous, 7–10 mm long, about 3 mm broad, more or less oblong or oblong-elliptic, sometimes slightly oblique and slightly narrowed towards base, mucronate or bi-mucronate. Leaves subsessile, lettuce-green, subcoriaceous, broadest at apex narrowing into a petiolar-like base, plicate, apex rounded and emarginate with a recurved mucro or more or less truncate with 2 or more lobes, rough with minute, fringed scales and often minute, stellate hairs on margin, margin sometimes with a narrow red-brown rim. Inflorescence of 1–2-flowered cymes at apex of leafy branchlets and in axils of upper leaves; peduncle suberect, 5–12 mm long, with stipule-like bracts at base; pedicels crenu­nos, 2–3 mm long, with 3 narrow, 4–5 mm long bracteoles at base. Calyx often suffused or mottled with red, campanulate, rough with minute stellate scales and on margins with a few short hairs from a tubercled base, 6–9 mm long, somewhat 5–10-angled, 5-lobed; lobes about 4 mm long, broadly oblong, shortly acuminate and mucronate, sinuses narrow. Petals lemon-yellow, strongly twisted, rather exerted from calyx, 4–5 mm long, blade broadly oblong, contracted below middle into a claw with infolded margins and minute stellate hairs on edges of claw. Stamens about 5 mm long; filaments hyaline, oblong; anthers 2.5 mm long, ciliate. Ovary 3–4 mm long, 2.5–3.5 mm broad, 5-lobed, stellate-tomentose; stipe 0.5 mm long; styles 4 mm long. Capsule enclosed by persistent calyx and petals, about 6 mm long, 5 mm diam., 5-angled, thinly stellate-tomentose between angles, more coarsely so on angles. Found in Coastal Fynbos on limestone formations. Recorded from the Bredasdorp, Swellendam and Riversdale Districts in the Cape Province.

CAPE.—Bredasdorp: near Wygelegen, Acocks 23171; Schlieben & Ellis 12399; De Hoop Provincial Farm, Lewis 6031 (NBG); Windhoek Plato, C. V. van der Merwe 1006; near Arniston, Marsh 920; De Mond Forestry Reserve, Taylor 8248 (type). Riversdale: S. of Vermaaklikheid Post Office, Acocks 24124; Hanglip, Muir 1961. Swellendam: Cape Infanta, Walgate 879.

This recently described species is characterized by the leafy branches with regularly arranged, rather stiff leaves. The stipules are leaf-like and usually more than half as long as the leaves. They can be distinguished from the leaves of their shape which is more or less oblong and not clearly narrowed towards the base. The leaves and stipules, which appear to be glabrous, are minutely stellate-pubescent.

H. concinnifolia has, to date, been found only in Coastal Fynbos on limestone formations in the Bredasdorp district and eastwards to Riversdale. It can be distinguished from the nearly related species H. rudis and H. flammea principally by the more densely leafy branches with regularly arranged leaves. Compared with H. rudis it is also less strongly pubescent and from H. flammea it can be distinguished by the flowers being more compactly disposed, not in elongated racemose cymes. In the case of H. flammea the petals are usually dark red, at least on the outside, and on herbarium specimens they dry darker than the calyx. This is not usually so in H. concinnifolia which has been described as having yellow petals. Colour, however, often varies in most species of Hermannia and cannot be relied on as a diagnostic feature.

Shrublet, low, branched from base; branches subsparally hispid with long, fairly soft hairs, 2 or more grouped on a bulbous base, old wood glabrescent but rough with minute hair-bases. Stipules foliaceous, more than half the length of subtending leaf, oblong, narrowly oblong or ovate-lanceolate, usually broad-based, 5-10 mm long, hispid especially on margins. Leaves sessile to subsessile, neatly imbricately arranged, more or less oblong, usually narrowing slightly towards base, 6-10 mm long, entire or occasionally few-lobed at apex, hispid as on stipules. Inflorescence of 1-2-flowered cymes in axils of crowded upper leaves, appearing to grow in clusters at apices of branches and branchlets; peduncles short, about 1-2 mm long; bracteoles 3, linear, about 4 mm long; pedicels about 4 mm long, hispid as in other parts. Calyx about 6 mm long, lobed to just below middle, laxly pubescent with long hairs grouped on a bulbous base, tube cyathiform, lobes deltoid-acute. Petals white becoming pale pink, 7-8 mm long, upper portion oblong-ovobovate, narrowing just below middle into a claw with infolded margins, glabrous. Stamens about 4 mm long; filaments oblong-cuneate, hyaline; anthers 2.5 mm long, overlapping hyaline filaments for 0.75 mm. Ovary stellate-tomentose, about 4 mm long, 5-lobed, lobes rounded at apex; stipe 1 mm long; styles 4 mm long. Capsule more or less enclosed by the calyx and petals, about 4 mm long, subrotund, 5-lobed, stellate-pubescent with short hairs between sutures and longer hairs on sutures.

Found in Coastal Fynbos in sandy valleys between limestone ridges south of Albertinia; locally common. Recorded only from the Riversdale and Uniondale Districts.

37. Hermannia floribunda Harv. in F.C. 1: 201 (1860); Burtt Davy, Fl. Transv. 1: 267 (1926); in F.Z. 1: 542 (1960). Type: Transvaal, Vaal River, Jan. 1842, Burke & Zeyher s.n. (K; PRE!).

H. melissifolia Engl. in Bot. Jb. 35: 357. Type: Lesotho, Leribe, Dietenier 555 (B, holo.; PRE; Z!).

Suffrutex, 60-120 cm tall, branched at base, branches long, erect or sprawling, subdensely stellate-pubescent, hairs fairly long from a minute bulbous base, often shortly stalked, older glabrescent parts rough with minute persistent stalks. Stipules from ovate to ovate-acuminate, ovate-lanceolate or subulate, 3-7 mm long, 1-4.5 mm broad near base, soon withering and falling on old wood, stellate-pubescent. Leaves petiolate; blade ovate, ovate-cordate or ovate-oblong, occasionally broader than long, about 2-6 cm long, 1-7 cm wide near base, usually 5-nerved from prominent beneath, stellate-pubescent on both surfaces, hairs fine and appressed, from a central scale, some shortly stalked and caducous, lower surface slightly lighter than upper, margins unevenly crenate; petiole 1-3 cm long, stellate-pubescent. Inflorescence of 1- to several-,
mostly 3-flowered, cymes simple or crowded in axils of leaves and at apices of main branches and short lateral branchlets; flowers many, small, under 6 mm long on dried specimens; peduncles about 1-3 mm long, stellate-pubescent; pedicels 2-5 mm long; bracts more or less subulate or lanceolate, 1-3 mm long, 0.5 mm wide, stellate-pubescent on upper half, becoming thin and subinflated, 5.5 mm long, stellate-pubescent with hairs fine and some spreading, lobed to about one third from top, lobes mucronate. Petals about 6.5 mm long, narrowly oblong-ovobovate, with infolded lobes just below middle and narrow infolded margins on claw. Stamens about 5 mm long, with narrow, more or less linear, hyaline filaments overlapped by anther bases. Ovary about 2.5 mm long, densely stellate-tomentose, 5-lobed; stipe under 1 mm long; styles about 3 mm long. Capsule about 6 mm long and broad, exserted from persistent, subinflated calyx, 5-lobed, lobes acute to mucronate, punctate and stellate-pubescent, hairs from a microscopic scale or base, becoming short and wearing off with age.

Found on stony hill slopes, in shade or open grassveld, also on rocky ledges. Recorded from Leribe in Lesotho, the Potchefstroom District in the Transvaal and northwards to the Soutpansberg District. Also occurs in Botswana and Rhodesia.

38. Hermannia bryoniifolia Burch., Trav. 2: 258 (1824), as bryonieaefolia; DC., Prodr. 1: 494 (1824), as bryoniifolia; Harv. (under doubtful and little known species) in F.C. 1: 207 (1860); K. Schum. in Engl., Monogr. Afr. Pfl. 5: 56 (1900), it is obvious that the specimens he had before him did not belong to this species. In F.S.W.A. 84: 17, Schumann's concept is put into synonymy under H. minutiflora Engl. and this is in all probability correct although the two specimens cited have not been seen. H. minutiflora differs from H. floribunda in being a much smaller plant with smaller leaves and flowers and with canescent-tomentose branches.

H. floribunda is characterized by the long branchlets which arise near the base of the plant; these may be erect or sprawling and are stellate-pubescent not canescent-tomentose; they bear short, flowerless lateral branchlets. The specific name is apt, because in the axils of the leaves and at the apices of both the main and lateral branches, several cymes with flowers of different ages are clustered, with several grey, subglobose buds in each group.

From the description of H. floribunda Harv. given by K. Schumann in Engl., Monogr. Afr. Pfl. 5: 56 (1900), it is obvious that the specimen he had before him did not belong to this species. In F.S.W.A. 84: 17, Schumann's concept is put into synonymy under H. minutiflora Engl. and this is in all probability correct although the two specimens cited have not been seen. H. minutiflora differs from H. floribunda in being a much smaller plant with smaller leaves and flowers and with canescent-tomentose branches.
many but short, mostly under 0,5 mm long. Stipules variable, even on same specimen, from narrowly lanceolate to broadly ovate and then sometimes suborbicular and semi-amplexial at base, sometimes also 3-lobed, from about 2 mm to 5 mm long and 1-4 mm broad. Leaves ovate to ovate-oblong, varying in size (even on same branchlet), from 5×3 mm near base to 30×20 mm, distinctly stellate-pubescent on both surfaces, unevenly crenate-dentate on margin (twice crenate or shallowly lobed and crenate); petiole 3–15 mm long, densely and coarsely stellate- (pubescent. Inflorescence axillary of 1–3-flowered usually 2-flowered) compound, simple, dichotomous, ultimate branchlets, with most of leaves much reduced and so appearing to be racemose or paniculate cymes; peduncles varying greatly in length, 2,5–8 mm long, coarsely stellate-pubescent; pedicels similar but much shorter, 1–4 mm long; bracts linear-lanceolate, 2–4 at base of pedicels, stellate-pubescent. Calyx usually thin in texture, coarsely stellate-pubescent, 5-lobed to slightly above or slightly below middle. Petals yellow, more or less oblong with margins infolded in lower half, apparently glabrous but with a few minute hairs on infolded margins, narrowed at base into a short claw about 1 mm long. Stamens about 4 mm long, with hyaline oblong-ovate filaments, joined at base and with a few short hairs on shoulders which are overlapped by anther bases; anthers pointed, ciliate. Ovary±2 mm diam., stellate-pubescent, shallowly 5-lobed, sessile; anthers pointed, ciliate. Styles 2.5 mm long, sparsely and shortly hairy. Stamens about 6 mm long; filaments with larger leaves, calyces and capsules, and in having a clustered inflorescence and a calyx which is subulate hairs, lower surface finely and densely stellate-pubescent, shallowly 5-lobed, lobes obscurely keeled. Seeds reniform with folds or wrinkles and minutely granular.

In loamy ground on hills, among rocks, on rocky ledges in crennies. Recorded from Griqualand West, the Orange Free State, and across the Vaal River in the Potchefstroom District.


Suffrutex with several ascending branches from a thick tap-root, branches hispid with long, pointed hairs, one to several from a prominent base, sometimes interpersed with short gland-tipped hairs. Stipules 2–6 mm long, oblique, broad-based and decurrent, abruptly narrowed into an acumen up to 4 mm long, basal portion 1–3 mm broad, sparsely hispid with bulbous-based or stellate hairs. Leaves petiolate; blade narrowly to broadly ovate or suborbicular, mucronate, base broadly cuneate, dentate, upper surface and margin sparsely hispid with bulbous-based hairs, lower surface finely and densely stellate between the nerves, more coarsely so on nerves; petiole 2–8 mm long, hispid. Inflorescence terminal on branchlets, a lax racemosecyme, hispid as on branchlets and sometimes with gland-tipped hairs interspersed, bracts 3–5, like stipules but those at base of pedicels much reduced; peduncles 8–30 mm long; pedicels 2–6 mm long. Calyx about 5 mm long, more or less cup-shaped, 5 lobed almost to middle, sinuses wide, very sparsely hispid with one or more hairs from a bulbous base. Petals yellow, about 8 mm long, upper portion oblong-orbicular, narrowed just below middle into a claw with broadly infolded margins. Stamens about 5 mm long with oblong-cuneate haline filaments; stamens acute, ciliate, about 2.5 mm long.


Suffrutex, robust, erect, up to 1 m high; branches ascending, stout, dark brown, densely stellate-pubes-
Ovary about 2.5 mm long, stellate-hairy, hairs long at apex, 5-umbonate, 5-angled; stipe 0.75 mm; styles 3.5 mm. Capsule about 6 mm long, glabrescent or very sparsely hispid with grouped hairs, 5-angled, 5-umbonate, calyx and stamens persistent and sometimes petals too.

Found on mountain slopes, at the foot of sandstone ridges in humus-rich pockets of sandy soil. Recorded at apex, 5-umbonate, 5-angled; stipe 0.75 mm; styles 3.5 mm.

Ovary about 2.5 mm long, stellate-hairy, hairs long at apex, 5-umbonate, 5-angled; stipe 0.75 mm; styles 3.5 mm. Capsule about 6 mm long, glabrescent or very sparsely hispid with grouped hairs, 5-angled, 5-umbonate, calyx and stamens persistent and sometimes petals too.

There can be little doubt that this species is represented by Reichenbach's figure and his notes confirm this. Distinguishing features are the acute, dentate leaves, green and roughly pubescent on both sides and the obvious hispid hairs on all parts of the plant. The oblique broad-based stipule is a feature shared with several other species such as *H. prismatocarpa* and *H. repentina*.


Shrublet, rigid, spreading-erect, ruderal, 30–60 cm tall; branches rough with tubercle-c.ised hairs. Stipules narrowly to broadly ovate, acuminate to abruptly acuminate, rounded or cordate to semi-cordate and deciduous at base. Leaves petiolate; blade varying in shape and size, narrowly to broadly ovate to obovate, rounded or broadly cuneate to cuneate at base, crenate and crisped on margins, minutely densely stellate on both surfaces, sometimes whitish tomentose on lower surface, nerves prominent beneath; petiole about 3–7 mm long. Inflorescence of racemose cymes, cymes 1 or more at a node, 1–3-flowered, the terminal with flowers appearing clustered, branches of inflorescence stellate-pubescent with hairs short from a scaly base or longer from a tubercled base, gland-tipped hairs sometimes present; bracts like stipules; bracteoles deltoid to subulate. Calyx somewhat salver-shaped, 5.5 mm long, 5-angled in upper half, lobed to almost midway, sinuses wide, densely stellate-pubescent, the hairs long from a small reddish brown, tubercular base mixed with short hairs from a centrum. Scale. Petals "golden yellow", "orange-red" or "yellow and red", 9–12 mm long, twisted, oblong to suborbicular in upper half narrowing to a claw with infolded margins. Stamens about 6 mm long with hyaline, obovate filaments. Ovary about 2.5 mm long, 5-lobed; stipe 0.75 mm long; styles about 5 mm long. Capsule enclosed by persistent perianth, densely stellate-pubescent.

There is evidence that *H. rugosa* may hybridize with *H. multiflora*. The following paratypes are excluded: Adamson 2511, which is probably a hybrid, Pillans 4761 (cited as 4701), Gillet 4162 and H. Bolus 1519, some of which are *H. prismatocarpa* E. Mey. ex Harv.; Gillet 3731 which is probably *H. repentina* Verdoorn, and H. Bolus 9948, a putative hybrid nearest *H. scabra* Cav.


Uitenhage, Coega River near "Zwartkopskhoogte", Ecklon & Zeyher Enum. No. 334 (S,neo!; PRE, photo!; TCD, photo!; PRE!; LE!; NBG!).

H. nemerosa Eckl. & Zeyh., Enum. No. 434 (1834). Type: Cape, Uitenhage, between the Sunday's and Bushman's Rivers, Ecklon & Zeyher Enum. No. 335 (K, PRE, photo!; NBG!).

H. plicata sensu Eckl. & Zeyh., Enum. No. 341 (S; PRE, photo!; NBG!) (1834), non Ait.;

H. multiflora sensu Eckl. & Zeyh., Enum. No. 336 (K; PRE, photo!; NBG!).


H. candidans sensu Harv., l.c. (1860), pro parte majore, non. Ait.

Suffrutex, erect or suberect and widely branching at base; branches ascending, up to 60 cm tall; pubescence on branchlets, inflorescence and leaves varying from densely and smoothly to roughly and thinly tomentose, often with numerous minute gland-tipped hairs interspersed, or glabrescent with scattered rough stellate or tufted hairs. Stipules small (not leaf-like), subulate to deltoid-acuminate, 3–8 mm long, base 1–2.5 mm broad, rounded but not cordate, stellate-pubescent to stellate-tomentose. Leaves petiolate; blade variable in size and pubescence, ovate-oblong or broadly, rarely narrowly, oblong, occasionally suborbicular, 10–50 mm long, 6–30 mm broad, base broadly cuneate to rounded or somewhat cordate, apex rounded or rarely broadly acuminate and acute, margins faintly to distinctly crenate to base or almost so; pubescence varies from finely to softly stellate-tomentose on both surfaces to discoulourous with upper surface roughly stellate-pubescent and lower surface softly whitish tomentose. Inflorescence of 1 or several, 1- to several-flowered cymes in axils of upper leaves and often forming terminal, leafless, paniculate cymes; branches of inflorescence from densely tomentose to glabrescent with scattered stellate or tufted hairs, but often (on inland specimens) with numerous, minute, gland-tipped hairs interspersed. Calyx campanulate, about 3–7 mm long, texture thin, from thinly to densely stellate-pubescent or tomentose outside, with a few hairs on inside near margin, lobed in upper third or almost to half way, lobes deltoid, sinuses wide. Petals yellow turning red at maturity, not long persistent, 7–11 mm long, upper third suborbicular, 5–6 mm diam., "waist" 1.5–2 mm broad, lower portion with infolded margins, glabrous or obscurely ciliate and pubescent within, not tomentose along edges of claw. Stamens about 5 mm long, with broad, hyaline, obovate filaments ciliate on shoulder; anthers overlapping the filaments at base, ciliate. Ovary 4 mm long, 5-angled, stellate-pubescent, 5-umbonate at apex, shortly stipitate at base, styles adhering. Capsule usually exposed, up to 8 mm long, about as long as petals.
Found on rocky slopes, in hillside scrub, grassy valleys and sandy soil along rivers, coastal thornveld and dune veld. Recorded only from the Cape from the coastal area of Humansdorp eastwards to Bathurst and northwards through Somerset East to Middelburg and then south eastwards through King William's Town to Komga.

**Cape.**—Albany: Bushman's River, Store 2349; Grahamstown, Galpin 144; Coombes Valley, Bayliss 4352; Botha's Hill, Dyer 1451; Alexandria, near Nanaga, Acocks 12200; Quagga Flats, Burt Dayy 11930; Bushman's River Mouth, Lamhan 132; Galpin 10673. Bathurst: Bathurst, Sidey 3139; Hutchinson 1557; Port Alfred, Galpin 1551; Schlechter 2686; Kowie, Brun 680; 676; 7591. Fort Beaufort: Koonap Heights, Britten 2031. Humansdorp: Kabeljouw, Phillips 3325; Klipdrift, Thode A2464. Gordonsville, Town to Komga.

The pubescence varies considerably in this species, from densely and smoothly to roughly and thinly tomentose. Ecklon & Zeyher Enum. No. 334 in S was chosen as neotype because it has the ferrugineous pubescence mentioned in the original description.

This variable species is distinguished from *H. incana* mainly by the inflorescence which ends in a leafless, racemose or paniculate cyme, by smaller flowers with petals that fall, leaving the maturing capsule partly enclosed, and by the tomentum not being as uniform as that of *H. incana*. Moreover, *H. altheaoides* is not as tall or robust a shrublet as *H. incana*.

Remarking on his four varieties of *H. candidans* Ait., which mainly constitute the species here described, Harvey writes in F.C. 1: 186 “Very variable in size and pubescence, but tolerably constant in other characters. I have no hesitation in uniting under one head, the various specimens of Ecklon & Zeyher above quoted.” On examination of representatives of Ecklon and Zeyher specimens listed the same conclusion has been reached with the exception of Ecklon & Zeyher Enum. No. 333 which is *H. incana*, the earlier name for *H. candidans*.

The specimens of Schlechter 6103 in Z and BOL, the type number of *H. prismatocarpoides* Engl., fall within the variation of *H. altheaoides* Link, and that species is therefore probably also a synonym of our species. Note that the Botha’s Hill, at which Schlechter 6103 was collected, is the one near Grahamstown, not that near Durban.

43. **Hermannia minitiflora** Engl. in Bot. Jb. 55: 361 (1919); M. Friedrich et al. in F.S.W.A. 84: 17 (1969). Type: Cape, Namaqualand, Fis Schlechter 11426 (PRE, lecto.); W.; LEI; MO1; BOL!; Z!.

*H. floribunda* sensu Schum. in Engl., Monogr. Afr. Pl. 5: 56 (1900), non Harv.

Suffrutex, erect, bushy, 20–60 cm tall, much branched, in all parts canescent with two layers of stellate hairs, rays many from a central scale, spreading or in upper layer tufted on scales which often become detached, very minute black-headed glandular hairs often scattered in the tomentum, branches and stipules in somewhat zigzag. *Stipules* varying in size, 1.5–4 mm long, 0.5–1.5 mm broad. Leaves petiolate; blade suborbicular or broadly ovate-oblong, 4–19 mm long, 4–20 mm broad, truncate or broadly cuneate at base, sometimes some of upper leaves cuneate in lower third, obscurely 3–5-lobate, margin crenate, plicate or corrugated at least towards margin: petiole 2–10 mm long. **Inflorescence** of 1 or more 1–3-flowered cymes in axis of upper leaves and terminal on ultimate branchlets often forming leafy, cymose racemes, flowers on herbarium specimens under 5 mm long; bracts and bracteoles about 1.5 mm long, subulate, rather thick. **Calyx** broadly campanulate, on herbarium specimens up to 2.5 mm long, lobed almost to the middle. **Petals** yellow or orange and anthers, at least 1 mm long, almost 2 mm half, narrowed into a waist and produced below into a portion with infolded margins narrowing into a claw below, stellate-pubescent dorsally about middle. **Stamen** 3.5 mm long, with broadly obovate, hyaline filaments about 2 mm long, 2.5 mm broad in upper portion, with minute hairs on shoulders; anthers almost 2 mm long, ciliate, overlapping filaments at base. **Ovary** stellate-pubescent, shallowly 5-lobed; **style** 3.5 mm long, 2.5 mm broad in young capsule, enveloped by persistent calyx and corolla, 5-angled, at first densely stellate-pubescent then glabrescent and membranous.

Found on rocky hills, on boulders in valleys, in loose sandy soil, among grass and on sandstone rocks. Recorded from South West Africa from Omaruru in the north, southwards to the border and beyond into Namaqualand, to Kenhardt, Gordonia and Prieska Districts in the Cape with one record from west of Luckhoff in the Orange Free State.


S.W.A.—Bethanien: Helmeringshausen, Merxmüller & Giess 2826. Keetmanshoop: 48 km S. of Narubis, Dinter 8077; Ecklon & Zeyher Enum. No. 334 which is *H. incana*, the earlier name for *H. candidans*.

This species is close to *H. vestita*, but differs principally in the smaller flowers and the short hairs of the tomentum. The main areas of distribution are distinct. *H. minitiflora* is recorded from the central mountain plateau of South West Africa and southwards to the Arid Karoo-like southern districts along the Orange River valley, and across the border into the north-western Cape where the distribution overlaps in places that of *H. vestita*. See under that species for further notes.


*H. hissuta* Mill., Gard. Dict. ed. 8, No. 8 (1786). Type: Cape, Miller 8 (BM; PRE, photo.).

*H. plicata* Ait., Hort. Kew ed. 1, 2; 411 (1789). Type: Cape, cult. England, seed from Masson (BM, holo.; PRE, photo.).

Subherbaceous annuals or short-lived perennials becoming woody at base; stems branching from base with many lateral, ascending branchlets; branchlets sometimes densely stellate but pubescence throughout is stellate. Leaves more or less degree with short, patent gland-tipped hairs and long, patent, pointed hairs. *Stipules* leafy, ovate-lanceolate, the upper larger, about 1,1 cm long (sometimes 2 cm
long), 6–8 mm broad above base, gradually acuminate to a subacute apex, usually 3-nerved or faintly 5-nerved, entire or rarely unequally lobate, pubescent as on leaves and bracts. Leaves petiolar; blade varying in size, large ones more or less 6 cm long, 4 cm broad, ovate, ovate-oblong or ovate-lanceolate, shallowy cordate, rounded or broadly cuneate at base; lateral veins about 3, suberect, margins sinuate-crenate, upper surface rather laxly stellate-pubescent, more densely so on lower surface, sometimes with gland-tipped hairs or long, pointed hairs intermixed; petioles of varying lengths, the longer about 3 cm long, sometimes slightly swollen and kinked near the apex. Inflorescence of usually 2-flowered cymes, 3 usually developing successively in axils of leaves and crowded at apices of branches and branchlets to form leafy pseudopanicles; peduncles about 25 mm long, pedicels 5 mm long; bracts 3–5 at a node, sessile, narrowly ovate to linear, varying in size, up to 5 mm long and 1–2 mm broad near base, pubescent as on other parts. Calyx subinflated, campanulate, about 8 mm long, lobed to above the middle, obviously pubescent with three types of hairs, stellate, gland-tipped and long, patent, acute hairs. Petals cadmium-yellow (and do not turn red with maturity), twisted, about 9 mm long, upper third an oblong blade narrowing abruptly into a claw with broadly infolded margins, stellate-pubescent along sides of claw (not on margins). Stamens with hyaline filaments about 5 mm long and 1.5 mm broad near apex, narrowly obovate, ciliate on shoulders; anthers 3.5 mm long, acute, ciliate. Ovary very shortly (0.5 mm) stipitate, about 3 mm long, densely pubescent with stellate and long, pointed hairs, shortly 3-lobed at apex; styles cohering, acute, about 5 mm long. Capsule enclosed in persistent calyx and petals, 6 mm long, pubescence persistent; seeds several. Fig. 1.1.

Found in Fynbos and Renosterveld in the southwestern Cape, on mountain slopes, hills, in waste lands and sandy watercourses or in gravelly soil at roadsides. Recorded from the Peninsula eastwards to northern Mossel Bay and Uniondale, and northwards to Calvina.


This marsh-mallow leaved Hermannia is characterized by its many ascending, subherbaceous branchlets, the leafy stipules, the fineness of the conspicuous pubescence and the broadly campanulate, subinflated calyx. It is related to *H. disermifolia* and *H. amoena* of Namaqualand and where their distribution areas overlap it may hybridize with these species. The distinguishing feature is the appressed pubescence of *H. disermifolia* and *H. amoena* which covers the branchlets, as opposed to the soft spreading hairs found on *H. althaefolia*. Several putative hybrids have been noted among specimens under the name *H. althaefolia*.

**H. aurea Jacq.**—Hort. Schoenbr. t. 214 (1797) may be a synonym but this cannot be judged from the painting. It seems to have less of the long, patent, acute hairs and may be a hybrid. A specimen in W. named *H. aurea*, does not match Jacquin’s figure and is *H. althaefolia L.* *H. diversifolia* Eckl. & Zeyh., Enum. No. 324 included by Harvey and I.K. as a synonym of *H. althaefolia* is rather *H. demarcens* (see specimen in S).


Suffrutex, low, usually under 30 cm tall, when protected somewhat taller, sometimes, probably through heavy browsing, more or less prostrate with rather thick woody branches; young branches leafy to apex, completely stellate-tomentose hairs short and fine from a minute central scale, minute glandular hairs sometimes present, some stellate hairs very shortly stalked and readily falling, older branches thinly pubescent and dark coloured in contrast. Stipules narrowly lanceolate to oblong-lanceolate, 2–8 mm long, 1.5–4 mm broad near base, usually longer than those near base of plant, minutely stellate-pubescent. Leaves petiolar; blade suborbicular to broadly oblong or ovate-oblong, broadly cuneate or more rarely cuneate at base, shallowly and unevenly crenate on margins, 7–19 mm long, 5–11 mm broad, subdensely stellate-pubescent to tomentose with short fine hairs from a minute central scale, minute gland-tipped hairs sometimes present; petiole 2–7 mm long, sometimes basal leaves with petioles up to 19 mm long. Inflorescence of short, 1–2-, rarely 3-flowered cymes in axils of leaves which usually continue to apices of branches forming long, leafy, terminal, racemose cymes with secund flowers; peduncles 0.5–7 mm long, stellate-pubescent; bracteoles 1–2 mm long; pedicels 1.5–4 mm long, stellate-pubescent, hairs slightly longer than on branches. Calyx ovoid-globose to globose, narrowed at mouth, inflated, pale, about 7 mm long, shortly toothed, teeth deltoid, up to 2 mm long, sub densely stellate-pubescent with hairs short and fine from a minute central scale, sometimes stellate hairs rather stalked, rays relatively long, readily falling. Petals twisted, yellow or “golden yellow”, only shortly exserted from inflated calyx, about 5 mm long, more or less narrowly oblong in upper third, narrowing slightly into a waist and produced below into a claw with infolded margins, minutely stellate dorsally. Stamens about 5 mm long with narrow hyaline filament; anthers overlapping filaments at base, ciliate. Ovary depressed globose, 5-lobed, about 4 mm long, 5 mm diameter, densely stellate-pubescent; stipe up to 1 mm long; styles 4 mm long. Capsule enclosed in persistent calyx.

Found in Western Mountain Karoo, in sandy flats, in clay, shaly ground, on dolerite ridges “among vuggies”: Recorded from Laingsburg District through Sutherland to Calvinia District.

**Cape.—** Calvina: Akkerendam, Willem N.E.Br. *visiter* 859; Kree Kom, Acocks 18559; Laingsburg: Klein Roggeveld, Marloth 10396. Sutherland: Junction of Quaggafontein and Visrivier roads, N.W. of Sutherland, Thompson 1800; Waterkloof, Marloth 9675.

Characterized by the floriferous, tomentose branches which bear second flowers regularly arranged in the axils of leaves, in the upper half to two-thirds of branchlets. Closely related to *H. comosa*, from which it differs principally in the leaves, inflorescence and distribution. *H. johanssenii* has smaller leaves of more or less uniform size and arranged at regular, rather short intervals, reaching to the tops of the branches and consequently the axillary flowers, which are more or less of the same age and size, form a uniform
angles produced for 2 mm beyond the style bases, rounded; seeds reniform, corrugated. Fig. 2. 5.

Recorded from the north-western Cape as far south as Richmond and Colesberg and northwards through the Orange Free State, the southern-western Transvaal and Griqualand West to South West Africa. Found in deep sand or gravelly soil on flats or in stony ground at the foot of hills.


H. leucophylla Presl, Bot. Bemerk. 20 (1844). Type: Cape, Wittebergwacht near Griquatown & Ezelsfontein, Driegang s.n. (named H. picata) (TCD; PRE, photo.; PRE!; LE!).

H. dinteri Schinz in Herb. Boissier 6: 748 (1898). Type: South West Africa, between Inachab and Luderitzbucht, Dinter 6 (Z!).


H. ausana Dinter ex Range in Reprum nov. Spec. Regni veg. 36: 260 (1934), nom. nud. based on Dinter 6058 (Z!).

Suberaceous perennials, one to several stems arising from tap-root; stems branched at base; branches suberect to spreading-ascending, laxly subulate, lanceolate or ovate-lanceolate, 3-6 mm long, branched, pubescent to tomentose with fine short hairs. Petioles 5-20 mm long; pedicels 2-10 mm long; flowers suffused with shades of green, yellow or rose, 1500 mm long, depressed globose, 5-lobed almost completely enclosed in persistent calyx and petals, deeply 5-angled,

H. praemorsa Wendl., Bot. Beobacht. 91 (1798). Type: not traced but Wendland & Schrader 1259 in W! can be authentic; also specimens so named in Herb. Schrader (LE!).

H. mollis Wendl., Enum. No. 333 (S; PRE, photo.; SAM!).

H. praemorsa Wendl., Bot. Beobacht. 91 (1798). Type: not traced but Wendland & Schrader 1259 in W! can be authentic; also specimens so named in Herb. Schrader (LE!).

H. cinerascens Engl. in Bot. Jb. 55: 355 (1919) is probably most a synonym, and it is so treated by M. Friedrich et al. in F.S.W.A. The type gathering, Range 286, seen in BOL and SAM, could conceivably fall within the range of variation of H. comosa.

In Z. Schenk 321, which agrees with H. comosa, is noted as the type of H. hottenottolia Schinz but this name was evidently never published.

47. Hermannia incana Carv., Diss. 6: 328, No. 473 (1788); Reichb., Ic. Descr. Pl. Cult. t. 53 (1822); Eckl. & Zeyh., Enum. 42, No. 333 (1834). Type: Cape, cult. D. Cels, Paris (MA, holo.; PRE, photo.).

H. candicans Ait., Hort. Kew 2: 412 (1789); Jacq., Hort. Schenbr. t. 117 (1797); Reichb., Ic. Descr. Pl. Cult. t. 55 (1822); DC., Prodr. 1: 493 (1824); Harv., L.C. 1: 186 (1860), pro parte minore. Type: Cape, cult. Hort. Kew (BM, holo.; PRE, photo.).—var. incana Harv., I.e., pro parte as to title (Schinz but this name was evidently never published).

H. praemorsa Wendl., Bot. Beobacht. 91 (1798). Type: not traced but Wendland & Schrader 1259 in W! can be authentic; also specimens so named in Herb. Schrader (LE!).


Suffrutex, up to 2 m tall, usually erect; branchlets whitish grey tomentose with densely fringed scales on hairs flattened to give a smooth appearance, often minute gland-tipped hairs scattered in the tomentum. Stipules subulate to narrowly linear or long acuminate from a 0.5 mm broad base, 7 to 7 mm long, 1 to 1.5 mm broad at base, tomentose. Leaves petiolate; blade ovate-oblong to broadly or narrowly oblong, broadly cuneate to cuneate at base, 7-35 mm

H. comosa, a variable species and several putative hybrids have been noted. The feature which probably suggested the specific epithet, namely the stalked tufts of hairs which are commonly found on the calyx, is not completely diagnostic. These comas fall readily and appear to be absent on some plants. There is also considerable variation in the density of the tomentum, especially along sides, glabrescent. Stipules 3-6 mm long, 1 to 1.5 mm broad at base, tomentose.

Inflorescences of usually 2-flowered cymes, 2-3 developing at the apices of branches and in axes of upper leaves; peduncles 5–20 mm long; pedicels 2–10 mm long; bracts subulate to linear-lanceolate, usually 3 at a node, sometimes 2 joined together, 2-5 mm long. Calyx inflated, white or ivory-coloured and some flowers suffused with shades of green, yellow or rose, about 9 mm long, depressed globose, 5-lobed almost to middle, with lobes incurved, pubescent on outside with short stipitate hairs intermixed with longer, stalked, tufted hairs. Stipules narrowly deltoid, lanceolate or ovate-lanceolate, 3-6 mm long, 1-2.5 mm broad near the base, dorsally stipitate-pubescent. Leaves petiolate; blade oblong to oblong-ovate, rarely oblong-elliptic, broadly cuneate to cuneate at base, 7-35 mm long, 0.6-3.5 cm broad rounded at base, 1.5-5 cm long, 0.6-3.5 cm broad.

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long, 5—20 mm broad, softly stellate-tomentose on both surfaces, at least when young, faintly to fairly distinctly undulate-crenate except at the broadly cuneate base, apex rounded or sometimes shortly acuminate and acute; petiole 3—15 mm long, softly tomentose. Inflorescence of 1—several-flowered, but mostly 2-flowered, cymes, one or more developing in axes of upper leaves of ultimate branchlets, forming leafy, paniculate cymes; peduncles and pedicels tomentose but not quite as smoothly as on branchlets, not of equal lengths but both varying, peduncles from 2.5—20 mm long and pedicels 2—15 mm long; bracts usually 3 at apex of peduncles, subulate, about 3 mm long, caducous. Calyx stellate-tomentose, quillshaped, campanulate, 6—9 mm long, lobed in upper half, lobes about 3 mm long, deltoid, sinuses wide. Petals yellow, persistent 7—10 mm long, broadly rounded or truncate at apex, narrowing slightly at waist, claw broad with infolded margins and densely tomentose along sides. Stamens with hyaline, obovate filaments, minutely and sparsely pubescent on margins; anthers ciliate. Ovary about 8 mm long, 5-angled, stellate-pubescent, 5-umbonate at apex and shortly stipitate at base; styles adhering, at length narrowly cohering, about 5 mm long. Seeds narrowly obovate to suborbicular with a truncate or broadly cuneate base, varying in size even on same plant, from about 8 mm long and 7 mm broad just above base, to about 35 mm long and 30 mm broad (lower-most up to 45 mm long), some leaves in upper parts of plant narrowly ovate-lanceolate and cuneate in lower half, stellate-tomentose on both surfaces, strongly corrugated at least at margins, nerves prominent beneath obscurely 3-lobed as well as crenate at margin; petiole tomentose, 4—26 mm long. Inflorescence of 1 or more, 1—3-flowered cymes in axes of upper leaves and crowded at apices of ultimate branchlets or sometimes forming long, leafy, racemose cymes; mature flowers on herbarium specimens 6—10 mm long; bracts and bracteoles subulate to narrowly lanceolate, 2—10 mm long, up to 3 mm broad near base; peduncles and pedicels short, mostly under 5 mm long. Calyx not or subinflated with age, urceolate to campanulate, narrowed at mouth when young, lobed almost to middle, stellate-tomentose with short hairs, often mixed with long hairs, in mature flowers on herbarium specimens measuring from 4.5 mm to 9 mm long. Petals orange to lemon-coloured, about 6 to 9 mm ped, more or less oblong in upper third, then narrowed into a waist with infolded margins and produced below into a claw, stellate-pubescent in parts especially in waist. Stamens about 4 mm long, with broadly obovate to suborbicular hyaline filaments minutely pubescent on shoulders, anthers about 2.5 mm long, overlapping filament at base, ciliate. Ovary 5-lobed, about 2.5 mm long, stellate-tomentose, hairs long at apex; stipe about 1 mm long; styles corollaless, about 3 mm long, minutely capitulate and more or less cohering from flowers. Capsule enveloped by long-persistent calyx and corolla, about 5 mm long, stellate-tomentose with hairs short and long, 5-umbonate at the apex. Seeds reniform, corrugated, 1.5×1 mm, minutely papillose.

**Revised by Hermannia Subgenus Hermannia in Southern Africa**

Suffrutex, erect, bushy, up to about 60 cm tall but often smaller, densely tomentose on most parts with short-rayed stellate hairs radiating from a central scale, interspersed with usually longer rayed, grouped hairs on a scale which becomes detached and often with very minute, scattered, black-headed, gland-tipped, hairs; branches or branchlets often zig-zag. Stipules in upper parts of plant lanceolate to ovate-lanceolate, 6—10 mm long, 2—4 mm broad just above base, lower stipules smaller, 3—4 mm long, about 1 mm broad above base. Leaves petiolate; blade usually broadly ovate to suborbicular with a truncate or broadly cuneate base, varying in size even on same plant, from about 8 mm long and 7 mm broad just above base, to about 35 mm long and 30 mm broad (lower-most up to 45 mm long), some leaves in upper parts of plant narrowly ovate-lanceolate and cuneate in lower half, stellate-tomentose on both surfaces, strongly corrugated at least at margins, nerves prominent beneath obscurely 3-lobed as well as crenate at margin; petiole tomentose, 4—26 mm long. Inflorescence of 1 or more, 1—3-flowered cymes in axes of upper leaves and crowded at apices of ultimate branchlets or sometimes forming long, leafy, racemose cymes; mature flowers on herbarium specimens 6—10 mm long; bracts and bracteoles subulate to narrowly lanceolate, 2—10 mm long, up to 3 mm broad near base; peduncles and pedicels short, mostly under 5 mm long. Calyx not or subinflated with age, urceolate to campanulate, narrowed at mouth when young, lobed almost to middle, stellate-tomentose with short hairs, often mixed with long hairs, in mature flowers on herbarium specimens measuring from 4.5 mm to 9 mm long. Petals orange to lemon-coloured, about 6 to 9 mm ped, more or less oblong in upper third, then narrowed into a waist with infolded margins and produced below into a claw, stellate-pubescent in parts especially in waist. Stamens about 4 mm long, with broadly obovate to suborbicular hyaline filaments minutely pubescent on shoulders, anthers about 2.5 mm long, overlapping filament at base, ciliate. Ovary 5-lobed, about 2.5 mm long, stellate-tomentose, hairs long at apex; stipe about 1 mm long; styles corollaless, about 3 mm long, minutely capitulate and more or less cohering from flowers. Capsule enveloped by long-persistent calyx and corolla, about 5 mm long, stellate-tomentose with hairs short and long, 5-umbonate at the apex. Seeds reniform, corrugated, 1.5×1 mm, minutely papillose.

Found on mountain slopes, hill-sides, river banks and open veld. Recorded from the Karoo, the Cape midlands, the southern Kalahari and southern Orange Free State.
the lower half with the base truncate or broadly cuneate and the margins crenate and usually wavy, the subinfundibulated and somewhat urceolate calyx, and the rays of the grouped hairs, which are longer in parts than on the rest of the plant. In these features *H. vestita* resembles *H. minutiflora*. As the name implies, the flowers are consistently small, under 5 mm long on herbarium specimens, as against 5–10 mm in *H. vestita*. The calyx does not appear to be subinfundibulated in *H. minutiflora*, also the majority of the leaves is more suborbicular or oblanceolate than in our species. For a comparison of the areas of distribution see notes under *H. minutiflora*.

The type of *H. candidissima* Spreng. f. is cited as “Uitenhage, C.B.S. Zeyher (n. 149)”. The Uitenhage District as delimited at the time when the plant was collected, extended further north into the distribution area of the species. The plant is not known, however, from the Uitenhage District as defined today.

Specimens of *Drège 7298* in MO and LE are obviously *H. vestita* Thumb. Harvey (1860), however, cites this number as *H. scordifolia* Jacq. var. *integrifolia* Harv. This is probably a printing error for *Drège 7289* which is *H. scordifolia*. Common name recorded as “Katte Kruié”.


Suffrutex, about 50–60 cm tall, erect, much branched in upper half, branchlets densely stellate-tomentose with interspersed minute gland-tipped hairs, tomentum smooth, canescent with stellate hairs of varying lengths, mostly short, radiating from or grouped on a central scale (some scales readily becoming detached). *Stipules* 5–10 mm long, 1–5 mm broad at base, large ones found towards apices of branchlets and there ovate-acuminate from a broad clasping base or semi-ovate and decurrent on branchlets, stellate-tomentose on both sides, hairs mostly short but sometimes long on margins of stipules glabrescent on inner face, in lower parts of plant stipules smaller, narrowly ovate-acuminate to subulate, about 5 mm long. *Leaves* petioloed; blade oblong to ovate-oblong, 1–5×4 cm long, 0.5–2 cm broad, sometimes larger, stellate-tomentose on both surfaces, rounded at base and apex, crenate on margins, young leaves corrugated, nerves impressed above, prominent beneath; petiole stellate-tomentose, up to about 2 cm long. *Inflorescence* of 2- to 3-flowered cymes arranged in lax, racemose or paniculate cymes at apices of branches and branchlets and occasionally in axils of upper leaves, branches of panicle glabrescent with sparse, stellate hairs and scattered gland-tipped hairs, shiny brown in contrast to the canescent branchlets which they terminate; peduncles about 15 mm long, glabrescent; pedicels up to 5 mm long, remaining tomentose; bracts 5–10 mm long, 1.5–5 mm broad at base, ovate-acuminate to narrowly lanceolate; bracteoles smaller, narrowly lanceolate, linear or subulate. Calyx about 8 mm long, subinfundibulated, not narrowed at mouth, subglobose or campanulate, sometimes suffused with pink in parts, lobed to about middle, stellate-pubescent without, hairs longer and softer at base of calyx and on margins of lobes. *Petals* “golden yellow” or “orange-yellow”, turning orange-red at maturity, about 11 mm long, glabrous, oblong to oblong-globose in the upper half, narrowed into a fairly short and wide waist (about 2 mm wide) and produced below into a rather wide claw with infolded margins. *Stamens* about 7 mm long; filaments hyaline, obovate, microscopically and sparsely stellate on the shoulders; anthers overlapping filaments at base, ciliate. *Ovary* about 5 mm long, 5-lobed, densely stellate-pubescent, the hairs longer at apex; styles about 5 mm long; stipe up to 1 mm long. Capsule about 10 cm long, hidden by persistent petals and calyx, stellate-pubescent, 5-lobed, lobes rounded at apex.

Found on granite hills or in valleys, in sand or “yellow clay”, on or west of the escarpment in Namakualand and South West Africa. Recorded frequently at Steinkopf and surroundings, northwards into the Warmbad and Lüderitz Districts of South West Africa and southwards through Spektakelberg, that is west of Springbok, to the western parts of Vanrhynsdorp.

*H. amoena* is characterized by the glabrescent, slender, dark brown axis of the mature inflorescence, which contrasts sharply with the canescent tomentum of the rest of the plant, especially on the branchlets terminating in the inflorescences. Besides this diagnostic feature *H. amoena* differs from the closely related *H. disermifolia* in that the calyx of the latter is not at all inflated, the upper stipules not so large, and the hairs of the pubescence in *H. amoena* are longer and softer on some parts of the plant, usually at the base of the calices, giving a villose appearance to these parts. The main areas of distribution of the two species differ in that *H. amoena* usually occurs on or west of the escarpment, while *H. disermifolia* is found on the plateau east of the escarpment. The areas of distribution may overlap in places. Hybrids with *H. altihaefolia* are suspected.

*Drège 3262* (Z), named *H. erosae* E. Mey. (a species evidently not published) appears to be *H. amoena*. According to “Zwei Documente” it was collected on Kamosberg foothills, Kasparskraal, Ellenbogfontein and Geelbeekskaal.”

Holzhammer-Friedrich, when describing this species, cited the type specimen as coming from “Uhabis”. A photograph of a specimen of *Dinter 8074* in Kew shows a line drawn through “Uhabis” and “Numeeis” written above it, in what appears to be Dinter’s handwriting. The specimen could have been collected at either locality.


*H. bryoniifolia* sensu Eckl. & Zeyh., (as *H. bryoniifolia*) Spreng. f. is cited as “Uitenhage, C.B.S. Zeyher (n. 149)”, The specimen could have been collected from the Uitenhage District as defined today.

Dinter, when describing this specimen, leaves the name unprinted. A photograph of a specimen of *Dinter 8074* in Kew shows a line drawn through “Uhabis” and “Numeeis” written above it, in what appears to be Dinter’s handwriting. The specimen could have been collected at either locality.
become detached); tomentum interspersed with minute, gland-tipped hairs. *Stipules* subulate to narrowly ovate-acuminate, upper sometimes up to 7 mm long and 2.5 mm broad near base, lower smaller, tomentose on both sides, stellate hairs short. *Leaves* petiolate; blade oblong to ovate-oblong, about 10 to 20 cm long, densely stellate-tomentose on both sides, becoming pubescent on in older leaves, so in many shallowly lobate as well near base, nerves deeply impressed above, prominent beneath; petiole 3–9 mm long, stellate-tomentose as on blade. *Inflorescence* of 1–3-flowered cymes terminal on the branchlets and 3 or more developing in the axils of upper leaves forming a pseudoracemose cyme, branches of *inflorescence* stellate-tomentose and hairs short; peduncles 4–15 mm long; pedicels 2–5 mm long; bracts linear-subulate, 4–7 mm long, sometimes narrowly ovate or oblong-acuminate, 5–7 mm long, 2 cm broad near base, occasionally 3 together and united at base. *Calyx* not obviously inflated, 5–7 mm long, lobed almost to middle, densely stellate-tomentose, hairs short, fringing a central scale. *Petals* about 8 mm long, upper third oblong, narrowed slightly into a waist and then produced into a claw with infolded margins, glabrous. *Stamens* about 5 mm long; filaments hyaline, obovate; anthers overlapping filaments at base, ciliate. *Ovary* densely stellate-pubescent, about 2.5 mm long, shallow 5-lobed, lobes rounded at apex; stipe short, up to 1 mm long. *Capsule* 6 mm long, densely stellate-pubescent, calyx persistent at base.

Found on rocky hills, stony slopes, in dry riverbeds among rocks, and in sandy loam on sandstone hilllocks. Recorded from the north-eastern area of Vanrhynsdorp District northwards into Namaqualand as far as Springbok and a few miles farther north.

*H. disermifolia* is characterized by the densely stellate-tomentose calyx which is not inflated, the very much corrugated leaves, and the branchlets and axis of the *inflorescence* being ± smoothly stellate-tomentose with the rays of the stellate hairs short. M. Friedrich et al. in F.S.W.A. (1969) put *H. amoena* into synonymy under *H. disermifolia*, but more material of the former having come to light, it seems reasonable to keep them apart. The areas of distribution are adjacent and may overlap in part. *H. disermifolia* has been found in the northern portion of Vanrhynsdorp District and around Garies and Springbok in Namaqualand, whereas *H. amoena* comes principally from farther north, around Steinkopf and northwards into South West Africa in the Warmbad and Lüderitz Districts with a few southerly records on or near Spektakelberg, that is west of the escarpment. For further distinguishing features see the notes under *H. amoena*.

A specimen of Ecklon & Zeyher Enum. No. 332 in S named *H. bryoniifolia* Burch. is rather poor, but does appear to be *H. disermifolia*, as given in the Index Kewensis. It is certainly not *H. bryoniifolia* Burch.

**51. Hermannia mucronulata** Turcz. in Byull. mosk. Obschh. 31: 217 (1858); Harv. in F.C. 1: 199 (1860), Type: Cape, Uitenhage, “Van Stanentiousvriberge”, E. Ecklon & J. Zeyher Enum. No. 353 (TCD; PRE; photo.1; S; SAM; LE; W1).

*H. salviifolia* sensu Eckl. & Zeyh., Enum. No. 45, No. 353 (1834), as *salviifolia*, non L.f.

Suffrutex, 30 cm–1.25 m high, branchlets shortly tomentose with fringed scales interspersed with groups of short hairs from a scaly base. *Stipules* leaf-like, subsessile or petiole up to 1 mm long, about 15 x 4 mm, velvety tomentose on both surfaces, mucronate, somewhat cuneate at base. *Leaves* pectiole: blade obovate-oblong, 15–30 mm long, 6–15 mm broad in upper half, entire, velvety pubescent on both surfaces, mucronate, cuneate at base; petiole 2–4 mm long. *Inflorescence* of few-flowered cymes in the axis of upper leaves; peduncle about 6 mm long; bracts linear to subulate, 3–10 mm long; pedicels 3–7 mm long, shortly tomentose. *Calyx* inflated to subinflated, subglobose, about 9–10 mm long, lobed in upper third, subsparsely to densely stellate-pubescent, hairs short, many in a cluster on a scaly base, lobes 2–3 mm long, more or less deltoid with narrow sinuses. *Petals* yellow, shortly exserted from calyx, about 14 mm long with the apical portion recurved, narrowed in lower third to a short waist and produced into a claw with infolded margins, slightly hairy in waist. *Stamens* about 8 mm long with broadly obovate hyaline filaments; anthers about 4 mm long, overlapping filaments at base. *Ovary* about 3 mm long, densely and shortly tomentose; stipe 1 mm long; stigmas 6 mm long. *Capsule* enclosed in persistent perianth.

Found on mountains, along slopes and in gorges. Recorded from Humansdorp, Steylerville, Uitenhage, Port Elizabeth and Albany Districts.


Characterized by the leaf-like stipules, the stipules and leaves which are velvety tomentose on both surfaces, and by the subglobose, inflated calyx.

When Turczaninov described this species, based on Ecklon & Zeyher’s concept of *H. salviifolia*, Enum. No. 353, he wrote that it differed from *H. salviifolia* in the inflated calyx and that *H. salviifolia* could not be distinguished from *H. involucrata*. This suggests that he had Thunberg’s sense of *H. salviifolia* in mind which I have found is *H. involucrata*. *H. salviifolia* L. f. has an inflated calyx but *H. mucronulata* differs from it principally in the velvety pubescent, entire leaves.

*H. mucronulata* is nearest *H. velutina* in leaf character but differs in the larger flowers and the calyx which is lobed in the upper third and not to the middle or beyond.

Putative hybrids between our species and *H. hyssopi­folia* have been observed.

Much confusion exists in connection with specimens of *Drège 7267* as seen in various herbaria. In LE, S and W it is definitely *H. mucronulata*; in MO this number is mounted on a sheet with two distinct elements and two collectors’ labels. The specimen in the lower right-hand corner (nearest the *Drège* label) is *H. salviifolia* var. grandistipula. The other label, Krauss 1588 collected on the Winterhoek Mountains, belongs with the specimens in the upper half which are *H. mucronulata*. (See also *H. bracteosa* under Species Requiring Further Attention (p. 61). The type specimen of *H. bracteosa* Presl, in PR has the same two elements on it but only one label, *Drège* 7267.)
Presl described the right-hand specimen as *H. bracteosa* and the left-hand one as *H. velutina*. The former has not been matched and appears to be a hybrid between *H. velutina* and *H. salviifolia* var. *grandistipula* while the latter is *H. mucronulata*.


*I. L. Drege* in Govt. Herbarium 3029; hill and dunes Cape rivers, *I. C. Verdoorn* No. 354 (1834), non Cav.

Suffrutex, low, up to about 30 cm tall, much branched, lateral branches spreading, long, appressed-scyly and villose with loose, tufted, spreading hairs. *Stipules* broadly oblong to oblong and oblong elliptic, velvety appressed-pubescent on both faces with tufted, villose hairs intermingled on lower surface, usually 3-nerved from base on lower surface. *Leaves* crowded towards apices of branches, petiolate; blade ovate to oblong-cuneate or suborbicular-cuneate, rounded or subtruncate at apex, often folded, 6-12 mm long, 4-7 mm broad (near apex), velvety tomentose on both surfaces interspersed with grouped villous hairs from a scaly or tubercled base; petiole 2-6 mm long. *Inflorescences* of crowded, short cymes at apices of branchlets and in axes of upper leaves; pedicels short, up to 3 mm long, villose; bracts (not at apices of branchlets and in axils of upper leaves; overlapping filaments at base, ciliate.

*Filaments* oblong, hyaline; *anthers* about 2 mm long, broad, infolded margins.

*Petals* yellow, apparently glabrous, more or less narrowly oblong, about 10 mm long, slightly narrowed about midway into a claw with inrolled margins, glabrous. * Stamens* with broad, hyaline filaments about 6 mm long, anthers 2 mm long, overlapping filaments at base, minutely ciliate. *Ovary* about 2.5 mm long, densely stellate-hairy; stipe 1,75 mm long; styles 3 mm long. *Capsule* enclosed in persistent calyx, about 6 mm long, 5-angled; stipe 1.5 mm long.

*Capsule* enclosed in persistent calyx, about 6 mm long, 5-angled; stipe 1.5 mm long.

*Characterized by the inflated calyx which is usually pale greenish to lemon-yellow, narrowed at the mouth with crowded, short cymes usually crowded at apices of branches and branchlets; bracts large, 3- or more-nerved from base, about 9×4 mm; bracteoles smaller, about 3-7 mm long, 1.5-3 mm broad; peduncles 4-9 mm long; pedicels 2.5 mm long. Calyx inflated, with 5 obtuse angles, subglobose to oblong-globose, narrowed at mouth, about 9 mm long, 6 mm diam., lobed almost to halfway but lobes broad and connivent, stellate-pubescent outside. *Petals* “lemon to yellow”, “citron-yellow”, “pale greenish" or "cream with red rim", narrowly oblong, about 10 mm long, slightly narrowed about midway into a claw with inrolled margins, glabrous. *Stamens* with broad, hyaline filaments about 6 mm long, anthers 2 mm long, overlapping filaments at base, minutely ciliate. *Ovary* about 2.5 mm long, densely stellate-hairy; stipe 1,75 mm long; styles 3 mm long. *Capsule* enclosed in persistent calyx, about 6 mm long, 5-angled; stipe 1.5 mm long.*


*H. suavis* is characterized by leaf-like stipules and an inflated calyx, besides the pale, villose pubescence which gives the plant a soft look.

53. *Hermannia hyssopifolia* L., Sp. Pl. 674 (1753); Cav., Diss. 6, fig. 3 (1788); Reichb., Ic. Descr. Pl. Cult. 49, fig. 3 (1822); DC., Prodr. 1: 1482 (1824); Eckl. & Zeyh., Enum. No. 355 (1841); Harv. in F.C. 1: 197 (1860); Adamson in Adamson & Salter, Fl. Cape Pennins. 586 (1950). Type: Cape, Cult., in Herb. Hort. Cliffortianus (BM, holo.; PRE, photo.).


*Suffrutex*, virgate with rigid branches, 36 cm-2 m high, sometimes over 2 m tall near river, new growth roughly and densely stellate-pubescent intermingled with tufted hairs on raised bases. *Stipules* varying in size from 1.5 mm long and subulate near base of plant to 12 mm long and 3 mm broad in upper portions. *Leaves* petiolate; blade broadest at or near apex and long-cuneate to base or oblong-elliptic, cuneate in lower half only, 9-30 mm long, 3-15 mm broad, toothed at apex only or in upper half, finely stellate-pubescent on both surfaces, sometimes densely so to velvety tomentose, glabrescent; petiole 5-8 mm long. *Inflorescence* of several bracteate cymes usually crowded at apices of branches and branchlets; bracts large, 3- or more-nerved from base, about 9×4 mm; bracteoles smaller, about 3-7 mm long, 1.5-3 mm broad; peduncles 4-9 mm long; pedicels 2.5 mm long. *Calyx* inflated, with 5 obtuse angles, subglobose to oblong-globose, narrowed at mouth, about 9 mm long, 6 mm diam., lobed almost to halfway but lobes broad and conniving, stellate-pubescent outside. *Petals* “lemon to yellow”, “citron-yellow”, “pale greenish" or "cream with red rim", narrowly oblong, about 10 mm long, slightly narrowed about midway into a claw with inrolled margins, glabrous. *Stamens* with broad, hyaline filaments about 6 mm long, anthers 2 mm long, overlapping filaments at base, minutely ciliate. *Ovary* about 2.5 mm long, densely stellate-hairy; stipe 1.75 mm long; styles 3 mm long. *Capsule* enclosed in persistent calyx, about 6 mm long, 5-angled; stipe 1.5 mm long.

*Widely distributed in Fynbos, Coastal Renosterveld or Karroid Broken Veld*. Found on mountain slopes or sandy plains. Recorded from the Cape Peninsula northwards to Malmesbury and eastwards to Port Elizabeth.


*Characterized by the inflated calyx which is usually pale greenish to lemon-yellow, narrowed at the mouth with usually citron-yellow petals slightly exerted and reflexed, by cuneate leaves toothed at the apex or in the upper half, by a fine, close stellate pubescence often with tufted hairs interspersed, and especially by the bracteate inflorescences. These bracts are like large stipules and surround the flowers. The stipules in the lower part of the plant are the smallest and increase in size upwards.*

*Specimens have been observed that appear to be hybrids between this species and *H. mucronulata*.**
REVISION OF HERMANNIA SUBGENUS HERMANNIA IN SOUTHERN AFRICA

Tufted hairs from a scaly, glandular or raised tubercular base, rarely some softer, whitish hairs mingled with coarse, straw-to golden-coloured hairs. Stipples oblong or narrowly oblong-acute to narrowly lanceolate or subulate, 3.5–10 mm long, 1.5–4 mm broad. Leaves shortly petiolate, blade oblong-cuneate to oblong, narrowly oblong or oblong-elliptic, apex rounded and mucronate or subtruncate and lobed, base rounded, roughly pubescent as described above; 7–35 mm long and from almost as broad to about four times as long as broad. Inflorescence of 1–2–flowered cymes, densely to subdensely clustered at apices of branchlets; bracts linear to subulate. Calyx inflated, urceolate, laxly or subdensely stellate-hairy. Petals somewhat longer than calyx with apical portion reflexed. Capsule as long as or shorter than calyx, stellate-pubescent to glabrescent.

The aggregate species is characterized by the inflated, urceolate calyx and the pubescence which is mainly of rather stiff, straw- or golden-coloured hairs from a scaly or a glandular base or raised tubercular base.

With regard to the spelling of the specific name Recommendation 73Ga(a) of the Code is followed.

Key to varieties

Leaves from almost as broad as long to about twice as long as broad, oblong or obovate, entire, or lobed at the broadly rounded or subtruncate apex, densely stellate-pubescent.

Stipules oblong, lanceolate or subulate, small to large but less than half the size of the subtended leaf:

- (a) var. salviifolia
  
  *H. salviifolia* L. f., Suppl. 302 (1781); Harv. in F.C. 1: 193 (1860); partly—var. ovalis Harv., l.c. as to Zeyher 1993 (S; PRE, photo!; PRE!; S; PRE, photo!)

- (b) var. grandistipula
  
  *H. micans* Schrad. in Schrad. & Wendl., Sert. Hannov. 11, t. 5 (1975); Reichb., l.c. Descr. Pl. Cult. t. 49, fig. 1 (1822); Eckl. & Zeyh., Enum. 44, Nov. 1834. Type: Cult. Hort. Hannov., bottom right hand specimen, with the name *H. micans* written in Schradier's handwriting (LE, holo!; PRE, photo!)

- (c) var. oblonga
  
  *H. latifolia* Jacq., Hort. Schoenbr. t. 119 (1797). Iconotype: Figure in Hort. Schoenbr. t. 119.

Stipules long, lanceolate or subulate, small to large but less than half the size of the subtended leaf:

- (a) var. salviifolia
  
  *H. salviifolia* L. f., Suppl. 302 (1781); Harv. in F.C. 1: 193 (1860); partly—var. ovalis Harv., l.c. as to Zeyher 1993 (S; PRE, photo!; PRE!; S; PRE, photo!)

- (b) var. grandistipula
  
  *H. micans* Schrad. in Schrad. & Wendl., Sert. Hannov. 11, t. 5 (1975); Reichb., l.c. Descr. Pl. Cult. t. 49, fig. 1 (1822); Eckl. & Zeyh., Enum. 44, Nov. 1834. Type: Cult. Hort. Hannov., bottom right hand specimen, with the name *H. micans* written in Schradier's handwriting (LE, holo!; PRE, photo!)

- (c) var. oblonga
  
  *H. latifolia* Jacq., Hort. Schoenbr. t. 119 (1797). Iconotype: Figure in Hort. Schoenbr. t. 119.

Caulescence oblong, narrowly oblong or subulate, 3.5–10 mm long, 1.5–4 mm broad, usually much less than half the size of the subtended leaf. Leaves densely pubescent towards apices of upper branchlets, shortly petiolate; blade oblong-elliptic or obovate-oblong, entire or toothed in upper portion especially at rounded or truncate apices, 10–30 cm long, 5–15 mm broad, never more than about twice as long as broad, usually roughly and coarsely stellate on lower surface, finer and more densely so on upper surface with minute, black glands intermingled, hairs straw-coloured or golden yellow, sometimes exuding a glistening substance which is clear or golden yellow; petiole up to 5 mm long, rarely 7 mm. Inflorescence of 1–2–flowered cymes in axils of crowded upper leaves of ultimate branchlets forming dense clusters; peduncles and pedicels very short; bracts linear to subulate usually obvious around flowers. Calyx urceolate, inflated, about 7 mm long, laxly to subdensely pubescent with usually long hairs from a scaly base, lobes connivent about 2.5 mm long, sinuses narrow. Petals yellow, orange, "marmalade-coloured", orange becoming red with age, about 7 mm long, shortly exserted from calyx with exserted portion recurved, narrowly oblong in upper half, narrowing into a claw with narrowly infolded margins, apparently glabrous. Stamens about 5 mm long, filaments hyaline, oblong to oblong-cuneate; anthers overlapping filaments at base. Ovary 5-lobed with a short, 1 mm long, stipe. Capsule shorter than calyx, about 4 mm long, 4 mm in diameter, enveloped by persistent perianth, eventually exposed and glabrescent.

Found in coastal bush and on slopes, also in passes north of the coast. Recorded from the Peninsula to Port Elizabeth and more inland from Montagu to Willowmore with one record from Graaff-Reinet.


In the typical variety the leaves vary considerably in shape and are not always entire.

(b) var. grandistipula Harv. in F.C. 1: 193 (1860). Type: not designated.

Diffsers from the typical variety principally in the leaf-like stipules which are usually half or more than half the size of the subtended leaf. It also differs in the hisrate pubescence which is intermingled with the dense, harsh pubescence of the typical variety.

Found in a fairly restricted area in the eastern Cape. Recorded from the Albany, Uitenhage, Somerset East and Port Elizabeth Districts.

**Cape.**—Albany: near Grahamstown, Macowan 360 (GRA; TCD); Green Hills, Britten 5388; Cobbes Valley, Bayliss 4309. Port Elizabeth: Port Elizabeth, Fries, Norlind & Weimarck 1067 (partly). Somerset East: Kommadagga, Burchell 3328 (K; LE, holo!; Uitenhage Zeyher s.n. in herb. Sieber Fl. No. 64 (W).

Harvey did not designate a type specimen for this variety. The specimen in TCD of *Macowan 360* (TCD, PRE, photo.) from near Grahamstown has the name "H. salviifolia var. grandistipula" written on the label in Harvey's handwriting and can therefore be considered authentic, but not a type, for it was collected after 1860, the date of publication of the variety. The same collection, *Macowan 360*, in GRA is also this species, but specimens of *Macowan 360* in K and Z do not have the large stipules and in all respects appear to be *H. salviifolia var. salviifolia*.

(c) var. oblonga Harv. in F.C. 1: 193 (1860). Type: not designated.


Diffsers from the typical variety in the leaves being consistently narrowly oblone, more than twice as long as broad and not so crowded. The stellate pubescence is not nearly so dense and the hairs on the upper surface of the leaves are shorter and arise from a conspicuous, dark, glandular base. The flowers are usually fewer at the apices of the branchlets.
Restricted to the coast in the George and Knysna Districts and in gorges along the northern borders of these districts.

CAPE.—George: near George, Schlechter 5860; Victoria Bay, Schlechter 1397; Knysna: Wittedrift, Plattenberg Bay, Pappe s.n. (TCD; PRE, photo.); Houtman Pass, Goukama 3785; Buffalo Bay, Keet 869; Paarde Kraal, Burchell 5168 (LE); between Knysna and Avontuur, Fries, Norlindh & Weimarck 1637; Goukama, Huis Meek 273. Uniondale: Prince Alfred's Pass, Acocks 21112; Sapree River, VanBreda 1173.

Harvey did not designate a type but a specimen in TCD, Pappe s.n., was named by Harvey "var. oblonga" and can therefore be considered as authentic.

55. HERMINIA HOLOSERICEA Jacq., Hort. Schoenbr. 1, t. 292 (1797); Reichb., IC. Descr. Pl. Cult. t. 69 (1822); DC., Prodr. 1: 495 (1824); Eckl. & Zeyh., Enum. 45, No. 362 (1834); Harv. in F.C. 1: 190 (1860). Type: Cape, cult. Hort. Schoenbr., Walker!; PRE, photo. 1.)

H. incana sensu Thumb., Fl. Cap. ed. Schultz, 505 (1823), based on Thunberg s.n. Herb. No. 15483 (UPS; PRE, photo. 1).

Suffrutex 30–120 cm tall; stem erect, laxly branched from base, lower branches long and spreading, ascending; branches slender, at least lower branches long and spreading, velvety grey-tomentose; branchlets numerous, short and slender. Stipules subulate to narrowly lanceolate, 2–8 mm long, velvety tomentose, early caducous. Leaves petiolate; Blade from narrowly oblong-cuneate to oblong-cuneate or suborbicular, 5–25 mm long, 2–10 mm broad, finely and densely tomentose on both surfaces, apex truncate or rounded, margins crenate in upper half or at apex only; petiole 1–10 mm long. Inflorescence of compound cymes, terminal on upper, ultimate branchlets; flowers sound and often crowded; peduncles and pedicels velvety tomentose; bracts subulate to narrowly lanceolate, 1–3 mm long, velvety tomentose on both surfaces. Calyx about 3,5 mm long, stellate-tomentose without, tube turbinate, 5–10–ribbed, teeth up to 1,5 mm long, sinuses wide. Petals yellow, about 4,5 mm long, blade oblong, narrowed into a waist amidst which they are ciliate, lower third a claw with indistinct suffrutescence. Stamens with oblong-elliptic hyaline filaments, 1,75 mm long, united at base and surrounded by stigmate of the ovary; anthers with oblong-oblanceolate to oblong-ovate, 6–23 mm long, 2–6 mm broad near apex, the majority entire, velvety tomentose on both surfaces, caducous, rarely persistent, often submarginal, some leaves subtruncate or with one or more lobes at or near apex, broadly cuneate at base; petiole 2–3 mm long (extension of thick midrib obvious below). Inflorescence of 1–3-flowered cymes, leaf-opposed; peduncle subulate, slender, long, 4–15 mm long, usually curved downwards; pedicels short, 1–2,5 mm long; bracts like leaves and stipules but smaller, 0,5–2,5 mm long. Calyx about 5 mm long, turbinate, lobed to just beyond middle, scaly-pubescent without, tube 5–angled, lobes with apices often infolded, Petals yellow, about 6,5 mm long, upper third suborbicular, narrowed at waist, claw with broad, membranous, incurred lobes on margin. Stamens about 4,5 mm long; filaments hyaline, apparently glabrous, oblong-ovate; anthers ciliate, overlapping filaments at base. Ovary finely stellate-tomentose, hairs longer at apex, 5–lobed, 1,5 mm long with a short stipe 0,5 mm long; styles cohering, capitate at the apex, sparingly pubescent, often exerted. Capsule more or less hidden by persistent perianth, about 4,5 mm long, 5–lobed, stellate-tomentose; styles long persistent.

Found in Fynbos and Coastal Renosterveld, grassland, marginal forests, valley scrub, on lime flats, on hills and mountain slopes. Recorded from Worcester and Bredasdorp eastwards to Mossel Bay or just beyond.

CAPE.—Bredasdorp: Between Napier and Oudekraal, Acocks 15494; Fort Beaufort, Marsh 816. Caledon: on slopes of Kleinberg, 0,3 km north-west of Napier, Thompson 3204. Mossel Bay: Reyniersboere, Leyns 19039; Riversdale: Nature Reserve, Taylor 7737; Platplaat, Muir 471; near Wyders River, Muir 886. Swellendam: 27 km from Middelberg, Story 2888; near Heidelberg, Acocks 21098.

Characterized by entire, velvety tomentose leaves (tomentum made up of fringed scales and fine stellate pubescence), distinct but short petioles, small, subulate stipules, long, slender, leaf-opposed, spreading to decurred peduncles, and scaly calyces lobed to beyond the middle.

This species was confused by Ecklon & Zeyher with H. diversistipula var. graciliflora, which they referred to as H. cavanillesiana.

Drège 7283 in MO is for the greater part H. lavenulifolia and for the lesser part H. diversistipula and H. odorata.

Suffrutex up to 150 cm tall with suberect branchlets, new growth densely clothed with fringed scales, ribbed in parts. Stipules subulate, 3-8 mm long, up to 1 mm broad at base, usually less, velvety tomentose on both surfaces. Leaves cuneate into a very short petiole; blade oblong-cuneate to narrowly oblong-cuneate, 10-26 mm long, 2.5-7 mm broad near apex, velvety tomentose on both surfaces, usually folded along midrib which is thick and prominent beneath, acute and slightly recurved at apex, margin entire, occasionally with an odd tooth near apex; petiole up to 2 mm long. Inflorescence terminal on ultimate branchlets or in axils of, or opposite, upper leaves, in few-flowered pseudoracemose cymes, flowers more or less secund, peduncle short and stiff; bracts small fringed scales and stellate hairs, hairs long on margins of lobes; lobes about 2 mm long, acute, mucronate. Petals strongly yellow, rather thick; stigma terminal, ciliate, about 1 mm long, overlapping filaments at base. Capsule about 4 mm long, 5-lobed or shortly 5-umbonate at the apex, stellate-pubescent, especially along the lobes, hairs longer at apex; stipe under 0.5 mm long; styles adhering, rather thick, stigma terminal, capitulate.

Found in coastal kloof Mts; Kleinrivier area, N.E. of Smitskraal, Above, named "Kerskopp", 216 (1807). Type: Cape, cult. Kew., sine coll., BM was found to match the specimens cited here. It also matches Reichenbach's figure very well, cited above, named H. odorata. H. odorata differs from H. lavandulifolia in the plants being taller, more robust, the peduncles suberect instead of slender and crenuous, the calyx yellow-tomentose without and not so deeply lobed. This species is quite distinct from Mahernia odorata Andr., Bot. Rep. 7: 85 (1800). M. odorata sensu Eckl & Zeyher, Enum. No. 405, is H. scabra Cav. (=H. prestiana Turcz.).

Specimens labelled H. fourcadii Pillans ms. belong to this species.

58. Hermannia sulcata Harv. in F.C. 1: 200 (1860). Type: Cape, Sondag River near Port Elizabeth, Ecklon & Zeyher Enum. No. 359 (S, lecto.; PRE, photo. !).

H. odorata sensu Eckl. & Zeyh., Enum. 359, non Ait.

Suffrutex up to 60 cm tall, sprawling, much branched, branches slender, new growth tomentose with fringed scales. Stipules linear-oblanceolate, sessile, acute, velvety tomentose on both sides, 5-10 mm long, about 1 mm broad. Leaves shortly petiolate; blade velvety tomentose on both surfaces, narrowly obovate, 12-17 mm long, 5-8 mm broad near apex, often folded, margins usually entire, occasionally some shallowly crenate in upper portion; petiole about 2.5 mm long. Inflorescence of leafy racemose cymes terminal on branchlets and in axils of upper leaves; peduncle slender, suberect, bracteoles linear-subulate, in threes (reduced leaf and stipules), about 2 mm long; pedicels of ultimate pair of flowers more or less the same length. Calyx narrowly obonic, narrowed at the mouth, 5-lobed in the upper half, often with 5 thick, prominent ribs alternating with 5 less prominent ribs, fairly densely pubescent with small fringed scales and stellate hairs, hairs long on margins of lobes; lobes about 2 mm long, acute, mucronate. Petals strongly yellow, sometimes partly suffused with dark red, about 8 mm long, obov-obticular and emarginate in upper quarter, narrowing slightly into a long waist and in lower quarter into a spur with infolded margins, minutely stellate-pubescent just behind the margin of narrowed central portion. Stamens about 4 mm long with oblong-cuneate hyaline filaments; anthers ciliate, overlapping filaments at base. Ovary about 1 mm long, shallowly 5-lobed and very shortly 5-umbonate at the apex, stellate-pubescent, especially along the lobes, hairs longer at the apex; stipe under 0.5 mm long; styles adhering, rather thick; stigma terminal, capitulate.

Found on slopes, in river valleys, in clayey ground. Recorded from around Port Elizabeth, from near Grahamstown and in the Steytlerville District.

H. velutina DC., Prodr. 1: 495 (1824); Eckl. & Zeyh., Enum. 45, No. 357 (1834); Harv. in F.C. 1: 199 (1860); Sim, For. Fl. Cape Col. 146, t. 15 (1907). Type: Cape, Somerset East, "Zwartwater Poort", Burchell 3393 (K; PRE, photo. !; PRE; EF!)

Frutex, slender, erect, 70 cm to 3 m high, branches rather slender, new growth pubescent to velvety tomentose with minute fringed scales and stellate hairs, glabrescent. Stipules leaf-like, elliptic-cuneate to ob lanceolate-elliptic, 3-20 mm long. 1-6 mm broad, sessile or shortly petiolate, velvety tomentose on both surfaces, mucronate. Leaves petiolate; blade broadly to narrowly oblong-elliptic, to ob lanceolate-elliptic, 5-50 mm long, 2.5-20 mm broad, velvety tomentose on...
both surfaces, mucronate, often folded along midrib, midrib impressed above, prominent beneath; petiole 2–10 mm long. **Inflorescence** of short, paniculate cymes terminal on branchlets and in axils of upper leaves, 2.5–6 cm long; bracts early caducous, terete, up to 9 mm long, tomentose, mucronate, often folded along midrib, cymes terminal on branchlets and in axils of upper leaves, 2.5–6 cm long; bracts early caducous, terete, filaments at base.

**Fruits** narrowly elliptic to oblong, to 2.5–5.5 mm long; capsule exserted from calyx remains, about 7–8 mm long, pubescent with infolded margins, about 5 mm long, narrowly elliptic to oblanceolate-elliptic, 10–23 mm long, 4–8 mm broad, often acute at apex, mucronate at base, margins entire or rarely with a few teeth in upper portion, velvety tomentose on both surfaces, sometimes fairly thinly so; petiole 2–5.5 mm long. **Inflorescence** a few-flowered racemose cyme terminal on the lateral branchlets. **Calyx** tubular, campanulate, about 7 mm long, tomentose with short stellate hairs, minute gland-tipped hairs and fringed scales, lobed to above middle, subglabrescent, lobes acute to subulate from a deltoid base, about 2 mm long, sinuses wide, 4-angled, minutely stellate-pubescent at apex, stellate-tomentose hairs short but longer towards apex of ovary; stipe about 1 mm long; styles adhering; stigma small. Capsule exserted from calyx remains, about 7–8 mm long, pubescent with stellate hairs, hairs short except along sutures and at apex.

Found in karroid bushveld, on rocky slopes, in river valleys and karroid scrub. Recorded from Steytlerville and Graaff-Reinet Districts eastwards to the Fish and Kat River valleys.

**61. Hermannia diversistipula** Presl ex Harv. in F.C. 1: 198 (1860); Presl, Bot. Bemerk. 21 (1844), nom. nud. Type: Cape. Swellendam, Breede River, Drège 7274 (K, holotype; PRE, photo!.; LE!). Suffixetux, branches erect to spreading, ascending or long and distichously arranged, clothed with fringed scales. **Stipules** leaf-like, sessile, linear-acute to elliptic, oblong-ovate or oblong-elliptic, 3–10 mm long, 0.75–3.5 mm broad, scaly-tomentose on both surfaces. **Leaves** subsessile or narrowed into a short petiole; blade 5–20 mm long, 2–10 mm broad at apex, cuneate at base, apex rounded or truncate, sometimes lobed, mucronate, usually conduplicate with small mucro slightly recurved, scaly-tomentose on both surfaces; petiole up to 3 or rarely 5 mm long. **Inflorescence** of short, usually 2-flowered, axillary cymes, flowers reddening and usually succulent. **Capitulum** to about middle or almost to middle, scaly-tomentose outside, lobes deltoid or oblong, mucronate, apices often incurved. **Petals** twisted in upper portion, garnet-red or chrome-yellow, about 10 mm long, upper third broadly oblong, narrowing into a central waist, produced into a claw with infolded margins in lower third, minutely stellate-pubescent on margins in centre and on edges of claw. **Stamens** with hyaline oblong-elliptic filaments, about 3 mm long; anthers 1.5–2.5 mm long, ciliate. **Ovary** about 4 mm long, obscurely 5-lobed and 5-umbonate at apex, to about 6 mm long, drying thin. **Fruits** narrowly elliptic to cuneate-oblong, 10–23 mm long, 4–8 mm broad, often acute at apex, cuneate at base, margins entire or rarely with a few teeth in upper portion, velvety tomentose on both surfaces, sometimes fairly thinly so. **Leaves** usually shortly petiolate; blade narrowly elliptic-cuneate to oblanceolate-elliptic or oblong-cuneate, 10–23 mm long, 4–8 mm broad, often acute at apex, cuneate at base, margins entire or rarely with a few teeth in upper portion, velvety tomentose on both surfaces, sometimes fairly thinly so. **Leaves** usually..
almost 1 mm long; styles cohering, minutely pubescent. Capsule 5–7 mm long, 5-umbonate at apex, finely stipitate-pubescent, more coarsely so at apex. Seeds reniform, 1,5 mm long.

Found in stony soil on hill tops with karroid shrubs, also in river flats, valley bush, Coastal Renosterveld and Fynbos. Recorded from Tulbagh District and south-eastwards to George.

The aggregate species is characterized by the rather small, velvety tomentose, mostly entire leaves, the leaf-like stipules and the nodding, often secund flowers which are axillary and occur singly or in pairs on fairly short peduncles. The tomentum is made up of fringed scales intermingled with fine stellate hairs.

Key to varieties
Calyx over 5 mm wide at the mouth, with broad lobes; branches several from a thickened woody rootstock; stipules almost as long as the leaves.

(a) var. diversistipula

Suffruticos perennial with several spreading, ascending to erect branches from a thickened woody rootstock; branchlets clothed with fairly coarse, fringed scales. Stipules oblong-elliptic to oblong-ovate, 2–8 mm long, 1–3,5 mm broad in upper half, velvety tomentose on both surfaces with fringed scales. Leaves sessile to subsessile; blade cuneate from a rounded or obtuse apex, conduplicate, 3,5 to 12 cm long, up to 6 mm broad at apex, velvety tomentose on both surfaces with fringed scales, apex rounded or broadly obtuse and lobed. Inflorescence axillary in upper leaves (usually only the 3 upper leaves); peduncles 2–5 mm long; pedicels 2 mm long, bracts linear, about 2 mm long. Calyx scaly-tomentose, about 5 mm to 7 mm long, lobed to about middle, lobes more or less oblong, up to 3 mm broad, apical portion incurved. Petals red or yellow, about 10 mm long. Capsule subglobose, shortly exserted from calyx, 5-umbonate at apex.

Found on level stony soil on hilltops with karroid shrubs, on shale hillocks in valley bush and on river flats. Recorded from the Malmesbury District eastward to Swellendam District.

Cape.—Bredasdorp: between Elandsdorp & Wiedrich, D. & E. 440a; (G.B.); Klipdale, Smith 3200; Kykhoede, Acocks 22724. Caledon: west of Rietpoel, Taylor 3756; 23 km from Caledon on way to Swellendam, Story 3070. Malmesbury: Lucasfontein near Goups Hotel, Acocks 24302. Swellendam: Breede River, Drège 72734; Bonbiek Park, Acocks 22567. Tulbagh: Ceres Road (Wolseley), Schlchter 8988; Saron, Schlchter 7871 (LE; BOL).

Although the areas of distribution of the varieties overlap to some extent and are approximate, the typical variety seems to favour higher regions in karroid shrub, whereas var. gracilliflora is found at lower levels in Coastal Renosterveld or Fynbos.

(b) var. gracilliflora Verdoorn in Flower. Pl. Afr. 41, t. 1620 (1970). Type: Cape, between Heidelberg and Witsand, De Winter & Verdoorn 9095, cult. PRE 20920 (PRE, holo!; K!).

H. cavanillesiana Eckl. & Zeyh., Enum. 45, No. 361 (1834) partly, as specimens Ecklorn & Zeyher from between Hassaquaskaal and Breede River (TCD; PRE, photo!; PRE!; LE!); sensu Harv. in F.C. 1: 199 (1860) as to Ecklorn & Zeyher specimen cited.

Suffrutex up to 90 cm high with spreading branches which are distichous and densely to sparsely pubescent with minute fringed scales. Stipules linear-acute to narrowly elliptic, 3–10 mm long, 0,75–3,5 mm broad, tomentose on both surfaces with minute fringed scales and stipitate hairs, sometimes with minute glands intermixed. Leaves subsessile or shortly petiolate; blade tomentose on both surfaces, tomentum as on stipules, oblanceolate to obovate, cuneate at base, usually conduplicate, 4,5–20 mm long, 2–10 mm broad near apex, entire, apex broadly acuminate with a small recurved micro; petiol up to 3 mm long rarely up to 5 mm. Inflorescence of usually 2-flowered cymes, axillary, flowers secund; peduncle 2–5 mm long; pedicels 1–3 mm long, bracts up to 5 at base of pedicels variable and linear-lanceolate to ovate-lanceolate, simple or 3-lobed, lobes up to 3 mm long, acute. Calyx about 5 mm long, lobed almost to middle, obscurely 5-angled, tomentose without, lobes deltoid, acute or acuminate, apices sometimes strongly in-curved. Petals red or yellow, about 9 mm long. Capsule about 5 mm long, eventually half exserted from persistent calyx, 5-angled, 5-umbonate at apex.

Found in Fynbos, Coastal Renosterveld and valley bush along the southern Cape coast. Recorded from the Caledon District eastwards to George and Uniondale.


Besides the diagnostic characters mentioned in the key, that is the difference in habit, calyx and stipules, there are other features that may assist in distinguishing the two varieties. In var. diversistipula the fringed scales are usually larger, the leaves, which hardly exceed the stipules, are often lobed at the apex and the flowers are usually found in the axils of only the upper three to five leaves. In var. gracilliflora the fringed scales are minute, the leaves which overlap the stipules by about half are entire at apex and flowers usually arise in the axis of leaves along the upper half or two-thirds of the branchlets.

62. Hermannia cuneifolia Jacq., Hort. Schoenbr. 1, t. 124 (1797). Type: Cape., cult. Hort. Schoenbr., two flowering twigs on left hand of sheet, with the name, in Jacquin’s handwriting, on the label (W, lecto.; PRE, photo!).

Suffrutex, usually heavily browsed, varying in height from 15–90 cm tall, rigid, erect or spreading, much branched, branchlets very sparsely to very densely lepidote-stellate and then silvery grey in appearance. Stipules from small and subulate from a broad base to broadly ovate in upper parts of plant, base broad and sometimes subulate, apex acute or acuminate, up to about 3,5 mm long and 3,5 mm broad, and subsessile on leaves but with a few long hairs at apex or also on margin near apex. Leaves appearing fascicled when crowded on abbre viated shoots, shortly petiolate; blade dull grey-green to silvery grey, concolorous, cuneate, from about 6–18 mm long, 3–10 mm broad at apex, truncate, bi-lobed or broadly rounded and coarsely crenately
lobed at apex, sometimes connuplicate, upper and lower surfaces from sparsely to densely tomentose with fringed pitted scales (lepidote-stellate), lateral nerves usually obscure; petiole 1–9 mm long. *Inflorescence* a raceme of secund, 1–2-flowered cymes terminal on ultimate branchlets, or cymes 3–5 congested at apices of short, lateral branchlets; peduncles very short (1 mm long) and spreading or about 4 mm long and then strictly erect; bracts 2–3 or more at a node and sometimes 6–8 in an entire, elliptic bract among them, broadly ovate, usually about 3–4 mm long, 2–4, 5 mm broad at base, semi-amplexicaul, sometimes united, cuculate, sometimes with bristle-like hairs on margins and apex; pedicels 1–5 mm long, cernuous. *Calyx* campanulate, about 6 mm long, lobed to about one third the length, laxly to very densely lepidote-stellate, the scales and hairs straw-coloured or some light reddish brown. *Petals* bright yellow to dark orange-red, up to about 5–10 mm long, narrowed at base into a claw, claw glabrous to sparsely tomentose on margins. *Stamens* with hyaline, oblong-obovate filaments, a few hairs on shoulders; anthers 3 mm long, pointed, ciliate. *Ovary* densely lepidote-stellate (hairs short), shallowly 5-lobed, shortly stellate, the inflorescence is congested at the apices of branches and leaves a silvery grey appearance especially in eastern and northern regions. Under the microscope this pubescence is seen to be composed of pitted scales fringed with hairs.

Found along the eastern margins of the winter-rainfall area and from there eastwards to the Great Fish River and northwards to Namaqualand, the southern Orange Free State and Lesotho.

**Key to varieties**

Flowers second, about 9 mm long; calyx and leaves, at least on lower surfaces, densely lepidote-stellate. (a) var. *cuneifolia* Flowers 3 to 5 in a cyme, congested at apices of numerous short, lateral branchlets about 5,5 mm long, leaves fairly sparsely to sparsely lepidote-stellate on both surfaces.  

(b) var. *glabrescens*  


H. *cuneifolia* Jacq., Hort. Schoenbr. 1, t. 124 (1797); Reichb., Icon. Pl. Cult. 17 (1822); DC., Prodr. 1: 495 (1824); Acocks in F.C. 1: 189 (1860), partly as to Drége specimen cited, excluding syn. *H. multiflora* and specimens cited. Type: Cape, cult. Hort. Schoenbr., two flowering twigs on left hand sheet of the name, in Jacquin's handwriting, on the label. (W; lecto.; PRE; photo.);


H. *pallens* Eckl. & Zeyh., Enum. No. 48, No. 378 (1835). Type: Cape, Caledon, Potrivier, Langehoogte et Bontjes Kráal, Ecklon & Zeyher Enum. No. 380 (PRE; S);

H. *l epidota* Buch. ex Krauss, Flora 27: 294 (1844), nom. nud. based on *Krauss* s.n. from Winterhoek (W; PRE, photo.);

H. *membraniflora* Schltr. in Bot. Jb. 55: 359 (1919). Type: Cape, Vanhynsdorp: Pappelfontein, Onderbokkevel, Schlechter 10911 (K; PRE, photo.);

H. *triphylla* sensu Eckl. & Zeyh. Enum. No. 379 (as represented in SAM) is *H. cuneifolia*.

(b) var. *glabrescens* (Harv.) Verdoorn in Bothalia 10, 1: 79 (1969). Type: Without locality, Drége s.n. (K, lecto.); PRE, photo.!, W!).

H. *pallens* Eckl. & Zeyh. var. *glabrescens* Harv. in F.C. 1: 190 (1860), partly as to Drége specimen cited, excluding syn. *H. pfeilii*. The variety differs from the typical in that the shrublets are generally 30–60 cm tall, more repeatedly branched, the branchlets shorter, rigid and early glabrescent; the leaves are more sparsely lepidote-stellate, the inflorescence is congested at the apices of numerous, short, lateral twigs, usually with only 3 to 5 flowers in each cyme; the flowers are smaller, just over 5 mm long (instead of 8–10 mm long), the calyx more narrowly campanulate and slightly narrowed at the throat, and the petals glabrous or nearly so and a little concuate into the claw instead of distinctly ciliate to sparsely lepidote-stellate on margins and apex; pedicels 1–5 mm long, cernuous. *Calyx* campanulate, about 6 mm long, lobed to about one third the length, laxly to very densely lepidote-stellate, the scales and hairs straw-coloured or some light reddish brown. *Petals* bright yellow to dark orange-red, up to about 5–10 mm long, narrowed at base into a claw, claw glabrous to sparsely tomentose on margins. *Stamens* with hyaline, oblong-obovate filaments, a few hairs on shoulders; anthers 3 mm long, pointed, ciliate. *Ovary* densely lepidote-stellate (hairs short), shallowly 5-lobed, shortly stellate, the inflorescence is congested at the apices of branches and leaves a silvery grey appearance especially in eastern and northern regions. Under the microscope this pubescence is seen to be composed of pitted scales fringed with hairs.
Aliwal North and through Herbert District into the Free State, reaching Lesotho in the east.


LESOTHO.—Leribe: Dieterlen 755.

According to “Zwei Documente” the Drège specimen of _H. multiﬂora_, on which Harvey based his _H. pallens var. glabrescens_, was collected in the Hexrivierbergen, Bokkeveld, that is Ceres District, between these varieties.

In Flora Capensis 1: 190 Harvey suggested that _var. glabrescens_ was possibly _H. multiﬂora_ Jacq. This has proved to be incorrect (see notes under _H. multiﬂora_ Jacq.).

Some specimens from outside the known distribution area appear to be intermediates or hybrids between these varieties.

According to reports, the leaves when squashed form a sticky mass which is considered to have a healing effect when applied as a plaster to sores. This accounts for the common name “Geel pleisterbossie”, generally used in the Orange Free State. The prefix “geel” (meaning yellow) is misleading because the flowers may be bright yellow on some plants or orange-red on others.

Burke & Zeyher 122 in S is typical _H. cuneifolia_ Jacq, but it could hardly have been collected on the Orange River.

63. _Hermannia desertorum_ Eckl. & Zeyh., Enum. 48 (1834); Harv. in F.C. 1: 189 (1860). Type: Cape, near Graaff-Reinet, Ecklon & Zeyher Enum. No. 382 (K; PRE, photo.; S!; SAM!)

Suffrutex, usually heavily browsed, if protected, about 60 cm tall with slender, divaricate branchlets becoming indurated, branches chestnut-brown, drying dark brown or with slight metallic sheen, young hairs. _Leaves_ shortly petiolate; limb suborbicular, broadly cuneate into the petiole, from 5 x 5 mm to 8 x 7 mm, plicate at first and covered by a thin greyish rather serious tomentum, becoming glabrescent on upper surface, older leaves sometimes stellate-pubescent on both sides, broadly rounded at apex, deeply and broadly crenate except at base; petiole 2–3 mm long, pubescence as on leaf undersurface. _Inflorescence_ terminal, in few-flowered, racemose cymes, (sometimes 1-flowered and secund-hybrids?); peduncles and pedicels varying from very short, about 2 mm long, to 5 mm long, pubescence as on young branchlets; bracts 1,5–2,5 mm long, rather thick, broadly ovate to subulate from a broad base. _Calyx_ thin-textured in dried specimens, subinflated, 5-gibbose, about 5 mm long, wide at mouth, lobed to near middle, finely pubescent with minute fringed scales. _Petals_ yellow, minutely papillose within, upper half more or less oblong-orbicular, abruptly narrowed into a waist and produced below in a claw with margins inrolled, claw sometimes strongly aruncate, appearing glabrous, but a few microscopic hairs present. _ Stamens_ ± 4–5 mm long, with obovate-oblong, hyaline filaments which appear to be glabrous but have microscopic hairs on shoulders, united at base; anthers ciliolate, overlapping filaments at base. _Ovary_ broadly 5-lobed, very shortly stipitate, finely stellate-tomentose. _Capsule_ about 4 x 4,5 mm, stellate-tomentose, shallowly 5-lobed.

Found in karroid broken veld, on the jasper hills and in pan-like depressions with compact calcareous sand. Recorded from Laingsberg and Prince Albert in the south and northwards through Vanrhynsdorp and Prieska to Witpoort in South West Africa.


S.W.A.—Lüderitz South: Witpit, Merxmüller & Giess 28770.

Characterized by the fine, pale, stellate pubescence, the semi-inflated, shallow calyx, 5-gibbose at the base, the indurating twigs and suborbicular leaves, which are cuneate into a petiole and crenate-dentate.

Seed of _De Winter & Verdoorn_ 9009 germinated in Pretoria. One plant survived and grew to 60 cm tall, flowered profusely during June and July 1970 and was visited by swarms of bees.

Specimens which appear to be a form of this species have larger, glabrescent leaves and they occur west of the escarpment but not in regions with an annual precipitation below 100 mm and thus not near the coast. The following appear to belong to this form or are possibly hybrids nearest _H. desertorum:_

S.W.A.—Lüderitz South, Farm Spitskop, Merxmüller & Giess 28714; Zebrafontein, Merxmüller & Giess 28787.


Suffrutex, much branched, 20–80 cm tall, leaf-scars prominent; branchlets thinly grey-tomentose (tomentum of fringed, minute scales and stellate hairs), glabrescent, indurating and spiky but usually not sharp-pointed. _Stipules_ from semi-obilabiate to deltoid or subulate, falling by a microscopic hair present, or if persisting, becoming yellowish and bristly, 1–3 mm long, finely stellate-pubescent. _Leaves_ one or more at a node, very shortly petiolate; blade obovate to obovate-cuneate, often broader at apex than long, 4–15 mm long, 5–12 mm broad at apex, entire or obtusely 3- or more-lobed at apex, concoraneous, sometimes conduplicate, grey-tomentose on both surfaces, tomentum of fringed, minute, pitted scales; petiole 0,5–5 mm long. _Inflorescence_ of few-flowered, racemose
cymes terminal on ultimate branchlets, flowers secund; peduncle usually indistinguishable or up to 3 mm long; bracts and bracteoles from ovate to deltoid or subulate, 1.3-3 mm long, rather thick; pedicels 2-6 mm long, thinly tomentose as on branchlets. Calyx patelliform, subinflected, 5-anangled, from densely to sparsely finely stellate hairy without, lobed to almost middle, lobes erect, broadly triangular, sinuses wide. Petals bright yellow, about 10 mm long, blade more or less ovate, narrowed abruptly into a section with broad, incurved margins and below into a spur which is usually curved. Stamens with broad, hyaline, obovate filaments about 3.5 mm long, apparently glabrous on the shoulders; anthers ciliate, about 3.5 mm long, overlapping the filaments for 1 mm. Ovary about 2.5 mm long, obscurely 5-lobed, finely stellate-tomentose, hairs slightly longer at the apex; stipe 0.5 mm long; styles cohering, for 1 mm. 

Deltoid or subulate, 1-3 mm long, rather thick; petals bright yellow, about 3.5 mm long, overlapping the filaments for 1 mm. Ovary about 2.5 mm long, obscurely 5-lobed, finely stellate-tomentose, hairs slightly longer at the apex; stipe 0.5 mm long; styles cohering, for 1 mm.

5 mm long, stellate-pubescent, obtusely 5-lobed, finely stellate-tomentose, hairs slightly longer at the apex; stipe 0.5 mm long; styles cohering, for 1 mm.

5-lobed, finely stellate-tomentose, hairs slightly longer at the apex; stipe 0.5 mm long; styles cohering, for 1 mm.

H. cuneifolia sensu Harv. in F.C. 1: 189, partly.

65. Hermannia multiflora Jacq., Hort. Schoenbr. 1. t.128 (1797); Reichb., Ic. Descr. Pl. Cult. t.69 (1823); DC., Prodr. 1: 495 (1824). Type: Cape, Cult. Hort. Schoenbr., right hand specimen annotated by Jacquin (W, lecto!; PRE, photo.!).

H. cuneifolia sensu Harv. in F.C. 1: 189, partly.

Suffrutex, about 30-75 cm tall, bushy, much branched, outer branches spreading-ascending; branchlets lepidote-stellate, the new growth densely so. Stipules with lower lanceolate-subulate, about 2 mm long, the upper ovate-acuminate, about 3 mm long, 1 mm broad at base. Leaves petiolate, sometimes appearing fascicled when crowded on abbreviated lateral shoots; blade discoloured, usually oblong-cuneate, sometimes suboblong-cuneate, variable in size, from about 3 mm long and 1.5 mm broad near apex, to 20 mm long and 11 mm broad, rounded at apex, crenate-dentate in upper portion, dark and finely lepidote-stellate on upper surface, pale lepidote-stellate-tomentose beneath, midrib and subflabellate nerves impressed above and prominent beneath; petiole 1.5–5 mm long. Inflorescence of 1-2-flowered cymes arranged in fairly lax, terminal, racemose cymes, one to two at each node of raceme; peduncles straight, erect or suberect, varying in length, lower short, the terminal long, from about 5-20 mm long; pedicels usually shorter and slightly cernuous; bracts and bracteoles variable, ovate to lanceolate-acuminate, up to 5 at a node, often with an elliptic, entire stipitoid bract up to 9 mm long and 1 mm broad among them. Flowers yellow to orange-yellow, sweetly scented, about 8 mm long (rarely 5 mm long). Calyx broadly campanulate to subpatelliform, about 5 mm long, lobed to about midway, fawn to brown-tomentose, the lepidote-stellate pubescence dense, the scales reddish brown and hairs straw-coloured resulting in a mousy colour. Petals 5–10 mm long, subobicular to oblong-orbicular in upper half, narrowing into a short waist and produced below into a claw with inrolled margins, waist and claw densely to sparsely but obviously stellate-pubescent on margins. Stamens with filaments cohering at base of stipe; filaments hyaline, obovate-cuneate, pubescent on shoulders; anthers ciliate, slightly shorter than filaments which they shortly overlap at base. Ovary densely lepidote-stellate, the hairs long and erect at apex, shallowly 5-lobed, slightly stipitate; styles cohering, erect, about 2.5 mm long. Capsule densely lepidote-stellate, about 4 mm long, shallowly 5-lobed, withering calyx and stamens persisting at base.

Found along the west coast of Namaqualand from Kleinziee, just north of Buffels River, northwards to the Namib as far as the Lüderitz area.


S.W.A.—Lüderitz: Bogenfels, Schäfer sub Marloth 5244; Klinkhardsgebirge, Dinter 3882; 4057; Pomona, Dinter 6348; Haalenberg, Dinter 3804.

This species approaches H. cuneifolia in several respects, especially in the cuneate, concolorous leaves with more or less the same pubescence. Microscopically the tomentum on both sides is made up of fringed, with more or less the same pubescence. Microscopically the tomentum on both sides is made up of fringed, with more or less the same pubescence.
The areas of distribution of the two species meet, but do not overlap.

Among the *Hermannia* specimens in W, a specimen was found with the name *Hermannia multiflora* written on the label in Jacquin's hand. This has all the diagnostic features of the figured plant and is thus selected as the type specimen.

*H. multiflora* is very variable in habit and crosses readily, but the dense, mousey or brownish lepidote-stellate tomentum on the calyx appears to be a dominant feature, as are the cuneate leaves, which are whitish tomentose on the lower surface. One of the three bracteoles, the central one, sometimes elongates occasionally scrambling, usually about 40 cm tall but

<table>
<thead>
<tr>
<th>Species</th>
<th>Description</th>
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<tbody>
<tr>
<td>Her. multiflora</td>
<td>Stellate tomentum on both surfaces, lower white tomentose, and the rather thin calyx which is usually laxly stellate-pubescent, with the stellate hairs occurring mainly on the nerves.</td>
</tr>
<tr>
<td>Her. alnifolia</td>
<td>Broadly rounded at apex narrowing towards the centre, lower third with inrolled margins, abruptly narrowed into a short 0.5 mm long claw, inrolled margins obscurely ciliate or with sparse stellate hairs near margin.</td>
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long (over 0.5 mm), tubercle-based bristles, one or more from each tubercle, occasionally short, gland-tipped hairs present as well, sometimes more northerly and south-eastern plants the tubercle-based bristles are displaced by a stellate-pubescent and minute fringed or stellate scales. *Stipules* narrowly to broadly ovate, rounded or cordate at base, often broad, oblique, amplexicaul or decurrent at base, to acuminately to abruptly acuminate at apex. Leaves petiolate; blade narrowly oblong, 8–36 mm long, 2–10 mm broad, rounded at base, sometimes slightly narrowing towards the rounded base and acuminate, margins acute-acuminate, 3–5 mm long at base; bracteoles up to 3 at base of pedicels, narrowly ovate, lanceolate with acuminate apex or subulate, 1.5–3 mm long, 0.75–1.5 mm broad. Calyx flank-shaped, narrow at base, pubescent as on inflorescence and branchlets, glabrescent, about 5 mm long, lobed to above middle, lobes sparsely ciliate or densely and softly so in the eastern form, sinuses finely and pubescent. Petals about 7 mm long, suborbicular in upper half, narrowed below into a claw with infolded margins, glabrous in specimens dissected. Stamens about 6 mm long, cohering at base around stipe; filaments hyaline, oblong-cuneate, minutely and sparsely pubescent on shoulders; anthers ciliate, overlapping the filaments at base. Ovary shallowly 5-lobed, stellate-pubescent on the sinus, about 2 mm long, stipet 1 mm long; styles cohering, 4 mm long. Capsule shallowly 5-lobed, stellate-pubescent along sutures, minutely so between sutures, glabrescent, fading slightly and obtuse at stipe. Found on hills and mountain slopes in river valleys. Recorded from Namaqualand southwards to the Clanwilliam and Worcester Districts (especially in the Hex, Krom and Olifants river valleys) then eastward to the George, Uniondale and Steytlerville Districts.

CAPE.—Clanwilliam: Brakfontein, Ecklon & Zeyher Enum. No. 400; Olifants River, L. Bolus 20328 (BOL); S. of Citrusdal, De Winter & Verdoorn 9056; Schieben 12440. George: W. N. W. of Camfer Station, Estery Lys 16790 (BOL); Zebra, Compton 24442. Laingsburg: Fissanteekraal Valley, Compton 21118 (NBG); Namaqualand: Scally 198 (BOL); Skilpad, Barker 8621 (NBG); Kamieskroon, Esteryhuyse 23602. Picketberg, Porterville, Edwards 188 (Z) and in BOL 28606. Steytlerville: W. of Wilgehof, Oliver 4572. Swellendam: Swellendam, Ecklon & Zeyher Enum. No. 1. Uniondale: Kromme River Heights, Fourcade 2698 (BOL); Mannetjieberg, Oliver 3660. Worcester: Hex River near De Doorns, H. Bolus 8007; Tweedside, Marloth 10802 (BOL); Mauwe & I. Oliver 211.

This species is characterized by the narrowly oblong leaf-blade sometimes narrowing slightly towards the base, but with the base rounded, not cuneate, the entire- or shallowly cuneate, the undersurface and the sinuate-crenate, slightly recurved margins which form a narrow dark rim around the undersurface, by the long, lax, terminal paniculate cymes with long slender peduncles and pedicels, and the usually broad-based stipules and bracts. A fourth characteristic, found on the types and other specimens from the western Cape, namely the tubercle-based, long, bristle-like hairs borne laxly on most parts of the plant, seems to be replaced in specimens from northerly (Namaqualand) and more easterly regions by a denser stellate pubescence of short hairs (character displacement?).

*H. muricata* is close to the not very well known species *H. repetenda*, which is a more erect plant with usually broader, obovate or broadly oblong-ovate leaves cuneate in the lower third, not narrowly oblong and narrowed towards the rounded base as in *H. muricata*.

As in other species, a small-flowered twiggy form of *H. muricata* occurs occasionally. Examples are: Khamieskroon, Esteryhuyse 23602 (BOL); Pakhuis Pass, Esteryhuyse 21935 (BOL) and Khamiesberg, Pearson 6139 (SAM).


*H. hirsuta* Schrad. in Schrad. & Wendl., Sert. Hannov. 10, 4 (1795); Willd., Sp. Pl. 3: 594 (1800); Reichb., Ic. Descr. PI. Cult. 1. 59, fig. 2 (1822); DC., Prodr. 1: 495 (1824); F.C. 1: 190 (1860), excl. syn., non Mill. (1768). Type: as above.

Sulfrutex, erect, virgate, laxly branched above, ultimate branchlets ending in an inflorescence which often turns slightly aside with a younger branchlet developing below and overlapping it, sparsely pubescent with minute stellate hairs, sometimes with short, gland-tipped hairs intermingled, often also sparsely hirsute with long, pointed, patent hairs about 1–1.5 mm long arising singly or 2 or more from a bulbous base, apparently caducous or readily broken off. *Stipules* acuminately to abruptly acuminate, ±5–12 mm long, base broad to subcordate sometimes very oblique and subamplexicaul, pubescent as on branchlets but sometimes denser. Leaves petiolate; blade fairly narrowly to broadly oblong, oblong-ovate or oblong-ovate, cuneate in lower third, 15–40 mm long, 7–20 mm broad, crenate except at cuneate base, 3-nerved at base, nerves impressed above, prominent beneath, subflabellately branched, upper surface finely stellate-pubescent and minutely papillose and usually sparsely to densely pilose with long, pointed hairs, undersurface usually, at least when young, whitish tomentose with fine stellate pubescence; petiole 3–15 mm long, pubescent. Inflorescence terminal, of lax, paniculate cymes; bracts 2- or 3-nate, occasionally the third a long, subulate bract, otherwise like stipules varying from ±5 mm long and acuminate from a fairly broad base, to 14 mm long and abruptly acuminate from a broad, oblique subcordate, decurrent base; peduncles and pedicels with pubescence as on branchlets. Calyx lobed to above middle, about 6 mm long, sinuses broad, texture thin, minutely stellate-pubescent, densely so at base (on cultivated plants?), sometimes long, bulbous-based hairs and short, gland-tipped hairs present. Petals about 7 mm long, narrowed about halfway into a claw, blade suborbicular, claw with inrolled margins obscurely ciliate. Stamens about 4 mm long, with filaments cohering at base, hyaline, oblong-obovate, 2.5 mm long, about 1 mm broad near apex, sparsely stellate on shoulders, anthers 2 mm long, ciliate, overlapping filament at base. Ovary 5-lobed, stellate-pubescentes pejicially along thees tuures, rays short, but with longer bristle-like hairs at apex; stipe 0.5 mm. Capsule about 6 mm long, minutely and finely stellate-pubescent between sutures, more coarsely so on sutures. Apparently extensively cultivated in the gardens of Europe in the late 18th and early 19th centuries.
Very rarely found in the wild today. Recorded from the Piketberg, Clanwilliam and Graaff-Reinet Districts.

CAPE.—Clanwilliam: Wupperthal, Mauve & I. Oliver 93; N.E. of Pakhuis, Acocks 15050. Clanwilliam: Ouberg Pass, Oliver 3197; Piketberg: Piketberg, Haafström & Acocks 929; Rest Mtn, Giller 3737 (BOL); Elandsberg, Pillans 7952 (BOL).

In the past this species was confused with *H. aspera* Wendl., a very distinct species differing principally in the inflorescence which in *H. aspera* is a fairly short, paniculate cyme, terminal on the short, lateral branchlets. In addition, *H. aspera* has crowded, sessile leaves strongly crisped on the margins.

In some respects *H. repetenda* resembles *H. multiflora* but differs in the fine stellate pubescence or hispid hairs on the calyx in contrast to the dense, brownish, stellate tomentum on the calyces of *H. multiflora*.

Another related species is *H. muricata* (see under that species for distinguishing features).

Although *H. repetenda* is well represented in European herbaria, the specimens having been made from plants cultivated in gardens, especially in the Herrenhausen garden, Hannover, but very few, widely distributed present day records exist. This is apparently one of the many *Hermannia* species which is heavily cropped by browsing animals.

*H. repetenda* is characterized by the inflorescence which is a long, lax, paniculate cyme, terminal on the ultimate branchlets but usually turning aside while a lower branch develops and overtops it.

When the new name for this species was published in *Bothalia* 10: 77 the locality "Van Ryns Pass" was given, based on *De Winter & Verdoorn 9018* collected there. This specimen has since been found to be *H. rigida* and, to date, *H. repetenda* has not been recorded from that locality.

69. *Hermannia rigida* Harv. in F.C. 1: 188 (1860).

Type: Namaqualand, Zeyher 112b (1126 spahml.) (S, holo.); PRE, photo.!.)

*H. oligantha* Salter in J S. Afr. Bot. 12: 99 (1946). Type: Cape, Clanwilliam District, 8 km east of Graafwater, Salter 2750 (BOL, holo.!).

Shrublet, rigid, fairly laxly branched, virgate, up to about 1 m tall; branchlets pubescent with fringed scales, hairs short, intermixed with fairly long hairs grouped on tubercled bases, minute gland-tipped scales, hairs short, intermixed with fairly long hairs (S, holo.); PRE, photo.!.)

Calyx finely stellate-pubescent especially at base, sometimes long hairs present as well, 5–7 mm long, lobed to above middle, sinuses wide. *Petals* bright yellow fading reddish, about 10 mm long, oblong above, narrowed into a claw with infolded margins, glabrous except for minute stellate tomentum on the diagnostic margins of infolded lower portion. *Stamens* with oblong-obovate, hyaline filaments about 4.5 mm long, minutely and sparsely stellate on shoulders; anthers about 2.5 mm long, ciliate, overlapping filaments for about 1 mm. *Ovary* about 2.5 mm long, 5-lobed, densely stellate-pubescent on angles and with long erect hairs at apices; stipe 0.75 mm long; styles about 4 mm long. *Capsule* 5–8 mm long with persistent calyx at base, 5-angled, 5-umbonate, finely stellate-pubescent to glabrescent between sutures, more coarsely so on angles and at apex.

Found on rocky ridges, at the base of sandstone boulders, in red sandy soil, or in sand. Recorded from the Clanwilliam and Calvinia Districts and from Namaqualand.

CAPE.—Calvina: upper part of Van Rhyn's Pass, De Winter & Verdoorn 9018; Ellis & Schlieben 12464. Clanwilliam: Nardouw road, Compton 22822 (NBG); Pakhuis Pass, De Winter & Verdoorn 9044; Olivier in STE 3128, Namaqualand: Namaqualand, Zeyher 112b (in F.C. 112 spahml.); W. slopes of Kamiesberg, Acocks 19517 (leaves mostly young and suborbicular, and in Kamieskroon, Compton 1106 (NBG); N. of Kamieskroon, Anegas, Pearson 6275 (SAM).

Characterized by the terminal pseudo-racemes of 1–3-flowered (mostly 1-flowered) cymes in which the penduncles are usually aborted or abbreviated and the pedicels stout and rigid.

Before seeing the type specimen kindly sent on loan from Herb. S, it was thought that *De Winter & Verdoorn 9018* and *9044* could fall in the range of *H. repetenda*, but more material of both these species has shown them to be distinct. Among other details, the lax racemose cymes of *H. rigida* with aborted peduncles clearly differ from the paniculate cymes of *H. repetenda* with long, slender peduncles and pedicels.

Having studied the type specimen of *H. rigida*, it was found too that *H. oligantha* is that species. Of the five cited specimens the type, Salter 2750 (BOL) is not very typical being more twiggy with all leaves young and suborbicular but it falls within the range of variation of the species and includes the diagnostic features of the inflorescence. The same applies to Pillans 7093 (BOL). The other three are typical *H. rigida*; Schlechter 8384 (fragment in BOL); Pearson 6275 (SAM) and Compton 1106 (NBG).

70. *Hermannia helicoidea* De Winter in Bothalia 11: 288 (1974). Type: Cape, Clanwilliam, Hex River valley, Pillans 9063 (PRE, holo.); BOL!)

Suffrutex, much branched; branches slender, young branchlets pubescent with minute, fringed or stellate scales and occasionally with a few tufted hairs on a tubercled base, older glabrescent. *Stipules* broad, amplexicaul and deciduous at the base, rounded at apex with a mucro or abruptly attenuate with a cuspidate or caudate apex, sometimes shallowly 3-lobed, margins obscurely crenate or dentate, finely and densely stellate on upper surface, hairs short, whitish stellate-tomentose below, glabrescent, 1.5–4 mm long, 2–6 mm broad at base. *Leaves* petiolate; blade narrowly to broadly oblong-cuneate, 3–10 mm long, rarely longer, 2.5–6.5 mm broad in upper half, finely and densely stellate on upper surface, whitish stellate-tomentose below, margins somewhat irregularly crenate as well as undulate;
petiole 1–3 mm long. **Inflorescence** axillary or terminal on lateral branchlets, cymes scorioid, usually curved in a helicoid fashion, with very slender, sparsely and minutely stellate-pubescent branches; peduncles up to 25 mm long; pedicels 1,5 mm long; bracts and bracteoles like the stipules but smaller, about 2 mm long, some appearing subulate from a broad base. **Calyx** campanulate, finely stellate-pubescent (hairs very short), about 4 mm long, 5-lobed to above middle, sinus wide. **Petals** about 6,5 mm long, more or less orbicular in upper half, narrowed below into a claw with infolded margins. **Stamens** about 4 mm long with obovate-oblong, hyaline filaments which are overlapped by anther bases. **Capsule** about 4 mm long, stellate-pubescent, somewhat 5-lobed, calyx persistent at base.

Found on hills or mountain slopes in river valleys. Recorded from the Clanwilliam District in the Hex and Olifants river valleys.

**Cape.**—Clanwilliam: without precise locality, Stokoe s.n.; hills in the Hex River valley, Pillans 9063; Olifants River valley, Schlechter 5902; north of Citrusdal, L. E. Taylor 1025 (MO).

Characterized by the monochasial, helicoid development of the slender, lateral cymes. In herbaria these specimens were mostly named *H. rigida*, which is a species of taller, more rigid and robust shrublets on hills in the Hex River valley, Pillans 9063; Olifants River valley, Schlechter 5902; north of Citrusdal, L. E. Taylor 1025 (MO).

In *H. helicoidea* resembles *H. muricata* superficially, but differs from it in leaf-shape and pubescence and in the inflorescence which is both terminal and axillary, and usually distinctly helicoid.

In *H. muricata* the leaves are narrowly oblong, rounded at the base and the margin sinuate-crenate to sinuate-dentate with the upper surface usually sparsely hairy with long tubercle-based hairs, rarely stellate-pubescent.


**H. helicoidea** resembles *H. muricata* superficially, but differs from it in leaf-shape and pubescence and in the inflorescence which is both terminal and axillary, and usually distinctly helicoid.

This species is plentiful over the area of its distribution and is well represented in most herbaria, due, probably to its roughness and woodiness which renders it unpalatable to browsing animals. It is distinguished from others with somewhat similar leaves (having the lower surface finely white stellate-tomentose) in that the leaves are sessile or subsessile and crowded. Judging from specimens in the Leningrad and Vienna herbaria this species flourished for several years, at the turn of the 18th Century, in the botanic gardens of Europe. To date it has been wrongly identified in all herbaria as either *H. scabra* or *H. hisruta*. Jacquin in Vienna published an excellent painting of this characteristic plant, in his Hortus Schoenbrunnensis, under the name *H. scabra* Cav., a wrong identification, for *H. scabra* Cav. is a distinct species (see note under that species). This mistake was subsequently recognized by several botanists, who then referred to it by the homonym *H. scabra* Jacq. A specimen of our species in the Leningrad Herbarium, of which there is a photograph in Pretoria (PRE Neg. No. 4576), is labelled *Hermannia scabra* Jacq, and in the same handwriting *H. aspera* Wendl. is given as a synonym. This led to the investigation of Wendland's name which was found to be the correct one for this species with sessile leaves. Unfortunately no type specimen has been traced to date, but the Leningrad specimen mentioned above was collected and labelled in the gardens of Götingen at a time when Wendland was associated with that University and so may be looked upon as an authentic representative of his species.

The use of the name *H. hisruta* stems from the mistaken conclusion that Wendland's species, *H. aspera*, was the same as that described by Schrader (1795) as *H. hisruta*, now named *H. repetenda* Schrad. (see notes under *H. repetenda*). This species differs from *H. aspera*, among other things, in the longer and laxer inflorescence and the petioloed leaves. It is not so densely leafy nor as rigidly woody and roughly pubescent and therefore more palatable. This may
account for its scarcity in comparison with *H. aspera*, in the veld as well as in herbaria.

Certain specimens collected in the Montagu District, where *H. disticha* occurs, appear to be a form or hybrid of *H. aspera* which is also recorded in parts of the district. The specimens are *De Winter & Verdoorn* 9086, *Compton* 18359 (NBG) and 18416 (NBG), *Lewis* in SAM 59089 (SAM), *Walgate* in BOL 23457 (BOL) and *Walgate* in BOL 23458 (BOL). All but the last do not have persistent white tomentum on the lower surface and so resemble *H. disticha*, and in all specimens the margin of the leaf is not so markedly recurved as in more typical *H. aspera*. All these are robust luxuriant plants and this suggests that they might be hybrids between *H. aspera* and *H. disticha* but nearest to *H. aspera*.


*H. conglomerata* E. Mey. in Drège, Zweil Pl. Doc. 191 (1843), nomen.

Suffrutex, suberect, with ascending branches, 10-60 cm tall, branchlets pubescent with long tubercle-based, few-rayed stellate hairs, with age hairs fall off and branchlets are rough with scattered tubercles. *Stipules* narrowly to broadly ovate-acuminate, cordate at base, about 8 mm long, with long, few-rayed stellate hairs. *Leaves* petiolate; blade subrotund, 1-2 cm diam., pubescent with long, few-rayed, stellate hairs, sparse and 1- to 2-rayed on upper surface, several-rayed and more copious on lower surface, margin crenate; petiole about 5 mm long. *Inflorescence* of sessile cymes crowded at ends of branches and branchlets, interspersed with leaves and bracts; bracts ovate-, or broadly lanceolate-acuminate, about 9 mm long and 3,5 mm broad near base; bracteoles linear-lanceolate, about 7 mm long and 1 mm broad near base. *Calyx* 6 mm long, 5-lobed to about midway, densely hispid, at least when young, with few-rayed, long, tubercle-based hairs. *Petals* about as long as calyx, strongly contorted and shortly exserted from the glabrous, more or less oblong calyx tube, obovate, rounded at apex, narrowing slightly at centre, lower half with margins narrowly inrolled and narrowing at base to a short claw. *Stamens* about 4 mm long; filaments hyaline, ± linear, narrowing towards base, glabrous in the specimens dissected, overlapped by anther bases; anthers shortly ciliate. *Ovary* about 2 mm long, 5-lobed, hirsute with long erect hairs.

Among karroid scrub on hillsides in dry river valleys. Recorded from Alexandria, Albany, Uitenhage and Riversdale (Fish River, Sundays River and Wyders River).


A sheet with five specimens of this species in the Bentham Herbarium was photographed by De Winter. The specimens are labelled as follows: (1 & 2) Drège 1838, no locality, (3) Schlechter 6113, Fish River (4) Cooper 1995, western districts and (5) Cooper 2012, Natal. There is probably some mistake about the last mentioned locality. No Natal record exists. Cooper 2012 with the same label is in Z.

The species is characterized by the long spreading hairs, especially conspicuous on the young flowers and the glomerate inflorescence.

Drège 7268 and 7292, cited in Zwei Documente from Zuurbreg as *A. glomerata*, are these species.

73. *Hermannia micrantha* Adamson in J1 S. Afr. Bot. 10: 123 (1944); Fl. Cap. Penins. 585 (1950). Type: Cape, Little Lion's Head, Salter sub Adamson 1901 (BOL!).


Suffrutex small, usually less than 30 cm tall, much branched; branches slender, divaricate, roughly stellate-pubescent with rays often over 0,5 mm long, and with short, gland-tipped hairs intermingled. *Stipules* usually in pairs, ovate, acute, cordate or rounded at base, oblique, one side deeply cordate, 2-3 mm long, 1-1,5 mm broad, coarsely stellate-pubescent, scaly and occasionally with gland-tipped hairs intermingled. *Leaves* petiolate; blade light green on both surfaces, not whitish beneath, obovate-oblong, narrowing slightly at base, about 6-10 mm long, 3-8 mm broad, rarely larger, stellate-pubescent and scaly on both surfaces, and sometimes with minute gland-tipped hairs intermingled, margins crenate; petiole 2-5 mm long. *Inflorescence* of 1- to 2-flowered cymes, terminal or laxly racemose on slender ultimate twigs; peduncles vary in length, often 1 cm long; pedicels 1-2,5 mm long, stellate-pubescent and with minute gland-tipped hairs; bracts like stipules ovate-cordate, those at base of ultimate cyme usually smaller and 3-lobed. *Calyx* about 3 mm long, 5-lobed to the centre or slightly beyond, stellate-pubescent without, and with minute gland-tipped hairs intermixed, teeth about 1,5 mm long, acute. *Petals* lemon-yellow, about 5 mm long, more or less oblong, rounded at apex, narrowing slightly to middle with lower portion with inrolled margins, hardly clawed at base. *Stamens* 3,5 mm long, with broad, obovate-oblong filaments with a few hairs on shoulders; anthers 1,5 mm long, cells acute at apex, ciliate on margins. *Ovary* and style about 3 mm long; ovary stellate-pubescent with long bristles at apex; styles with a few short, sparse hairs. *Capsule* about 4 mm long and 4 mm broad, deeply 5-lobed, lobes keeled and apices projecting above by about one third, stellate-pubescent, especially on keels, with some rays over 0,5 mm long.

Found on dry southern and western slopes of Table Mountain, on or in the vicinity of Little Lion's Head.

CAPE.—Peninsula: Little Lion's Head, Salter sub Adamson 1901 (BOL); Adamson 2618; Table Mt., foot of cliffs at west end, Estenburger 19251; lower west slopes, Pillans 4260 (PRE!).

This species is close to *H. alnifolia* but is distinguished by the leaves being green on both sides, obovate and broadly cuneate at the base and not suborbicular, the stellate pubescence coarser and interspersed with minute gland-tipped hairs. The capsule is more deeply 5-lobed with the apices longer (only different in degree).

In the Bolus Herbarium, the type specimen has the number 7417 added in pencil after Salter's name.

**H. rotundifolia** Jacq., Hort. Schoenbr. 63, t. 118 (1797).

Shrublet, erect, branched, 50-90 cm high; branchlets with long, tubercle-based, spreading hairs. **Stipules** deltoid to broadly ovate, acuminate, usually with a broad, cordate base, which is somewhat decurrent on the branch or stem, with single or few-rayed bulbous-based hairs, especially on dentate margin. **Leaves** distichously arranged, shortly petiolar; blade broadly ovate-oblong to obovate-oblong, 10×8-20×16 mm or sometimes longer, broadly cuneate or rounded at base, upper surface with long, bulbous-based hairs, which are single or few-rayed, lower surface with similar hairs but many-rayed or stellate from a tubercled or scale-like base, at first densely so giving a whitish appearance to underside; margins distinctly crenate-dentate; petiole very short or 2-5 mm long. **Inflorescence** a few-flowered, fairly short, racemose or paniculate cyme terminal on ultimate branchlets; pedicels short or up to 5 mm long, pubescent as on branchlets; bracts lanceolate-acuminate to ovate-acuminate up to 6 mm long, the upper small and lobed, sparsely pubescent with long, bulbous-based hairs. **Calyx** 5-lobed to about middle, about 5 mm long, sparsely pubescent with long stellate hairs from a tubercled or scale-like base. **Petals** more or less oblong, about 7 mm long, abruptly narrowed about midway, upper half suborbicular, lower half with broadly infolded margins, obscurely ciliate and pubescent, narrowing at base into a claw about 1.5 mm long. **Stamens** with hyaline filaments which are oblong, slightly narrowing towards base, about 3 mm long, with a few hairs on shoulders; anthers about 3 mm long, cells pointed, ciliate along sutures. **Ovary** somewhat 5-angled, pubescent (hairs erect and long at apex), very shortly stipitate, stipe about 0.5 mm long; styles minutely pubescent, about 3.5 mm long. **Capsule** enclosed in the ± persistent calyx and corolla, about 2.5×2.5 mm, 5-lobed, 5-umbonate at apex, stellate-pubescent, hairs long in upper half and at apex. **Seed** reniform, suborbicular, tubercled, ±1 mm diam.

**Characterized by the pubescence of long, patent, bulbous-based hairs, the broad, distichous leaves which are not persistently whitish pubescent on the lower surface and the short, +4 cm long inflorescences.**

**On the labels in several herbaria the authors are given as “Schräd. & Wend.”, but in the original description and in the Index Kewensis Wendland’s name does not appear.**


This species is closely related to **H. involucrata** having the same type of pubescence and leaf-shape and the same non-inflated calyx which is densely stellate-pubescent with yellow hairs. It differs from that species in the smaller leaves and flowers and the leaves being more erect and fairly closely apressed to the stem.

76. **Hermannia involucrata** Cav., Diss. 328, t. 177, fig. 1 (1788). Type: Cape, Thunbergia n.s. in Herb. Cav., (MA, holo.; PRE, photo.). (The specimen so named in the Thunberg herbarium (UPS, herb. No. 15484), does not agree, having an inflated calyx, but the one named "H. salviifolia" (Thunberg s.n. in UPS, herb no. 15492) appears to be this species.

**H. salviifolia** sensu Cav., Diss. 328, t. 180, fig. 2, non Linn. f.

Suflutex 60 cm to 1,3 m high, erect or straggling, branchlets with shiny, tufted hairs from a sessile, scaly base or a slightly raised tubercle, hairs long or short and give the new growth, leaves and calyx a golden hue. **Stipules** narrowly lanceolate, acuminate, subulate or linear-acute, 2.5-10 mm long, base 0.5-1.5 mm broad, rough and subluxily to densely stellate, incurved in upper portion. **Leaves** sessile to shortly petiolar; blade strikingly variable in shape from broadly elliptic to elliptic or oblong-obovate, 7-18 mm long, 4-7 mm broad, apex acute, rounded and mucronate or truncate and lobed, densely but roughly stellate on both surfaces, sometimes thickly tomentose, hairs long or short, mostly yellowish; petiole 0-1 mm long. **Inflorescence** a short, few-flowered, simple or branched cyme, terminal or in axils of upper leaves of branchlets; pedicels 2-5 mm long; bracts subulate, 2-7 mm long, seldom reaching more than basal third of calyx. **Calyx** not inflated, campanulate, densely and coarsely pubescent with stellate and tufted hairs, hairs golden yellow, tube 4-6 mm long, lobes about 2 mm long, deltoid, acute. **Petal**s 7-8 mm long, oblong in upper half, narrowed abruptly into a claw with inrolled margins, dorsally conspicuously stellate from lower portion of upper half almost to base of claw. **Stamens** about 4 mm long with broad hyaline filaments about 3 mm long; anthers ciliate, about 2 mm long. **Ovary** 2 mm long, 1.5 mm broad, 5-lobed, stellate-pubescent; styles 4 mm long, hairy at base; stipmasca pitate. **Capsule** enclosed by perianth, shortly exserted from calyx, about 5 mm long, subglobose, 5-lobed, stellate-pubescent; stipe short, up to 1 mm long.

**Found in mountainous country from the Ladismith area along the Swartberg eastwards to Willowmore.**


**Recorded to date only from the rocky kloofs in the Swartberg area.**
tube cup-shaped, lobes cupULATE from a deltoid base. **Petals** yellow, about 10 mm long, oblong in upper half, narrowed into a claw with rolled margins, apex rounded to subtruncate, recurved, dorsally finely stellate-pubescent in lower two-thirds. **Stamens** about 4–6 mm long with hyaline, obovate-oblong filaments; anthers about 2.5 mm long, ciliate. **Ovary** 5-angled, stellate at least on sutures; style 0.5–1 mm long; styles about 4 mm long. **Capsule** about 7 mm long, half exserted from persistent calyx, finely stellate-pubescent between sutures which are coarsely stellate-pubescent.

Found in gorges, kloofs and on mountain slopes in false Fynbos. Recorded from Ladismith, Uniondale and Willowmore eastwards to Uitenhage.


Differ from the closely related and variable species *H. salviifolia* in that the calyx is not diaphanous or uncoriaceous. Characterized by the tufted, shiny hairs which give the vegetative parts a golden yellow hue, the subcoriaceous, strongly ribbed, thickly stellate-pubescent petals which are dorsally, finely stellate-pubescent. Among the tufted hairs on the leaves and calyx are scattered minute pustules or lepidote-stellate calyx resembles the calyx of *H. involucrata* Cav. which has the same golden yellow hue.

In some specimens, e.g. Dahlgren & Peterson 26 and Acocks 16014, the pubescence is denser and shorter than anthers, hyaline, overlapped by anther bases, hairs often lobed, base rounded, laxly but distinctly and somewhat imbricate; blade oblong, obovate-cuneate, sometimes narrowly so, 4–16 mm long, 2–6 mm broad, apex acute, rounded to broadly rounded, petiole up to 2 mm long. **Inflorescence** of 1- to 2-flowered cymes in axils of upper leaves and at the apices of the branchlets; peduncle from 3–20 mm long; pedicels 1–7 mm long; bracts usually 3, 1 long and 2 shorter (the much reduced leaf and 2 stipules), ovate, lanceolate or subulate, 1.5–6 mm long, 0.5–3 mm broad, stellate-pubescent as on leaves, at least along margins. **Calyx** about 6.5 mm long, lobed almost to middle, densely yellow scaly-tomentose and stellate-hispid, flowers long, lobes about 3 mm long, deltoid-acute. **Petals** about 0.8 mm long, subulate in upper third, narrowed into a densely ciliate waist and produced into a claw with infolded margins. **Stamens** about 6 mm long, filaments hyaline, obovate-cuneate, ciliate on shoulders, overlapped by anther bases; anthers 3 mm long, acute, ciliate. **Ovary** oblong, about 2 mm long, shallowly 5-lobed, subglabrous or shortly stellate below, densely stellate at the apex of each locule, hairs long; stipe 0.5 mm. **Capsule** shortly exserted from persistent calyx, about 6 mm long, stellate-hairy.

Found in Coastal Renosterveld, on stony mountain slopes, in Fynbos and burnt patches. Recorded from Riversdale and Ladismith and eastwards to Port Elizabeth.

**Cape.—** Lingsburg: Wittebergen, Compton 2797 (BOL; K); 3159 (BOL); 12215 (NBG); foothills, Marloth 11424.

This species closely resembles *H. stipulacea*, but can be distinguished mainly by the leaves and stipules being densely and persistently pubescent on both surfaces instead of the very characteristic lax and distinct pubescence on those of *H. stipulacea*. In addition, the shape of the leaf is obovate-cuneate in *H. pilansii* and the flowers clustered in terminal cymes with rather short peduncles and pedicels.

Of the four syntypes, Compton 2797, 3159, 3299 and 3559, *Compton 2797* is here selected as type because there is a duplicate of this specimen in K.

### 78. Hermannia stipulacea Lehm. ex Eckl. & Zeyh. Enum. 44. No. 349 (1834); Harv. in F.C. 1: 182 (1860).

Type: Cape, near mouth of the "Zwartkops" River, Ecklon & Zeyher Enum. No. 349 (K; PRE, photo.); PRE!; W!; SAM).

Stufy, erect or sprawling with ascending branches, branches laxly, rarely subdensely, stellate-pubescent, hairs few and long, rarely short from a scaly base. **Stipules** leaf-like, about half the size of leaves or over half, ova-acuminate to ovate-lanceolate, cordate at base, 3.5–11 mm long, 1.7–mm broad near leaf base and distinctly and strongly stellate on both surfaces, hairs long; petiole up to 2 mm long. **Inflorescence** of 1- to 2-flowered cymes in axils of upper leaves and at the apices of the branchlets; peduncle from 3–20 mm long; pedicels 1–7 mm long; bracts usually 3, 1 long and 2 shorter (the much reduced leaf and 2 stipules), ovate, lanceolate or subulate, 1.5–6 mm long, 0.5–3 mm broad, stellate-pubescent as on leaves, at least along margins. **Calyx** about 6.5 mm long, lobed almost to middle, densely yellow scaly-tomentose and stellate-hispid, flowers long, lobes about 3 mm long, deltoid-acute. **Petals** about 0.8 mm long, subulate in upper third, narrowed into a densely ciliate waist and produced into a claw with infolded margins. **Stamens** about 6 mm long, filaments hyaline, obovate-cuneate, ciliate on shoulders, overlapped by anther bases; anthers 3 mm long, acute, ciliate. **Ovary** oblong, about 2 mm long, shallowly 5-lobed, subglabrous or shortly stellate below, densely stellate at the apex of each locule, hairs long; stipe 0.5 mm. **Capsule** shortly exserted from persistent calyx, about 6 mm long, stellate-hairy.

Found in Coastal Renosterveld, on stony mountain slopes, in Fynbos and burnt patches. Recorded from Riversdale and Ladismith and eastwards to Port Elizabeth.


Characterized by the leaf-like stipules and the subaxil, stellate pubescence with stiff hairs. The densely lepidote-stellate calyx resembles the calyx of *H. involucrata* Cav. which has the same golden yellow hue.
Harvey cites a Drège specimen from the Orange River. This must be a mistake, for the Orange River is far outside the known area of distribution.

_**H. pillansii**_ is closely allied to this species, but differs in the pubescence on the leaf (see under that species). Also, the hairs on the calyx are a lighter yellow, not so golden, and the stipules more acutely acuminate.


79. **Hermannia** filifolia _L. f._, Suppl. 302 (1781). Type: Cape, **Thunberg** s.n., Herb. No. 15473 (UPS, holo.; PRE, photo!).

Suffrutex, straggling, with slender branchlets or erect and robust, often heavily browsed. _Stipules_ leaf-like, somewhat shorter or longer and usually flatter than leaves. _Leaves_ sessile, fasciolated, at first crowded on abbreviated shoots, glabrescent, filiform to subulate, succulate (erectoid), sometimes appearing narrowly linear or linear-spathulate on pressed specimens, firmly fleshy or succulent and glaucous, 4–20 mm long, apex acuminate, not lobed, fascicles distant or crowded. _Inflorescence_ of 1- or more-flowered cymes in axils of upper leaves and at apices of branchlets in racemose cymes. _Calyx_ 4–6 (–10) mm, finely stellate-pubescent or rough with minute scales or tubercles. _Petals_ strongly twisted, usually dark red, blade oblong, abruptly narrowed just below middle into a claw which is pubescent on edges. _Stamens_ with more or less linear-oblong, hyaline filaments, shorter or longer and usually glabrous and shiny internodes and the flowers rough with minute scales or tubercles. _Capule_ 4–6 mm long, leaves firm, internodes rough with minute scales or tubercles as in the typical variety, up to 12 mm long. _Stipules_ leaf-like, somewhat shorter or longer and usually glabrous or minutely scaly pubescent, acute at apex.

The diagnostic feature of this variety is the large _calyx_ and the twist in _petals_. _Stamens_ are frequently succulent and glaucous, long internodes rarely minutely scaly, usually glabrescent and shiny. _Capule_ is usually dark red petals, being pale pink or more often cream-coloured, finely stellate-pubescent and lobed to just beyond the middle, lobes long-acuminate to apex. The fasciolated leaves appear linear to linear-spathulate and plicate on pressed specimens but are described as subterete, sometimes firm in texture but often succulent and glaucous. Shoots from heavily browsed plants are characterized by having long, usually glabrous and shiny internodes and the flowers in fairly lax, terminal, racemose cymes. The capsule is larger than in the typical variety, up to 12 mm long. Found along foothills, stony ridges and on steep shaly slopes or rocky outcrops. Recorded from the Little and Great Karoo, from Montagu eastwards through the northern areas of George to Steytlerville and northwards to Sutherland and Beaufort West.

**H. linifolia** sensu Harv. in F.C. 1: 195 (1860), non Burr. I.

The diagnostic feature of this variety is the large _calyx_, about as long as, and much paler than, the usually dark red petals, being pale pink or more often cream-coloured, finely stellate-pubescent and lobed to just beyond the middle, lobes long-acuminate to apex. The fasciolated leaves appear linear to linear-spathulate and plicate on pressed specimens but are described as subterete, sometimes firm in texture but often succulent and glaucous. Shoots from heavily browsed plants are characterized by having long, usually glabrous and shiny internodes and the flowers in fairly lax, terminal, racemose cymes. The capsule is larger than in the typical variety, up to 12 mm long. Found along foothills, stony ridges and on steep shaly slopes or rocky outcrops. Recorded from the Little and Great Karoo, from Montagu eastwards through the northern areas of George to Steytlerville and northwards to Sutherland and Beaufort West.
examined since have shown that it is merely a variety of that species.

(c) var. robusta Verdoorn in Bothalia 10: 572 (1972). Type: Cape, Port Elizabeth, Glendinning Vale, 2.4 km N.W. of Donkin Memorial, Olivier 458 (PRE, holo.).

_H. filifolia_ sensu Eckl. & Zeyh., Enum. 47, No. 372 (1824), partly, as in BOL, non L.f.

This variety differs from the typical, principally in the longer, more crowded leaves, the usually larger flowers and the more robust plant. The plant can be up to 1 m tall and the branchlets are rough with minute scales or tubercles, not totally glabrous or (var. _denudata_) at first rough with many small leaves present on young shoots) lanceolate and in axils of upper reduced leaves of ultimate branches; bracts like much reduced leaves and stipules, linear to subulate. Calyx glabrous or rough with minute, fringed scales, occasionally intermixed with longer, fascicled hairs from a glandular base, glabrescent in parts. Eastern Transvaal and Swaziland. (b) var. erecta

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**Key to varieties**

**Vegetative parts entirely glabrous. Western Cape and Namaqualand.**

(a) var. _denudata_

Vegetative parts rough with minute, fringed scales and tufted hairs from a glandular base, glabrescent in parts. Eastern Transvaal and Swaziland. (b) var. _erecta_

---

**Key to varieties**

**Vegetative parts entirely glabrous. Western Cape and Namaqualand.**

(a) var. _denudata_

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(a) var. _denudata_

Vegetative parts rough with minute, fringed scales and tufted hairs from a glandular base, glabrescent in parts. Eastern Transvaal and Swaziland. (b) var. _erecta_
81. **Hermannia flammaea** Jacq., Hort. Schoenbr. 1: 69, t.129 (1797); Sims in Curtiss's bot. Mag. 39: t.1349 (1811); DC., Prodr. 1: 495 (1824); Eckl. & Zeyh., Enum. 46, No. 367 (1834); Harv. in F.C. 1: 196 (1860). Type: Cape, Cult. Hort. Schoenbr. (W, lecto.; PRE, photo.).


Suffrutex up to about 65 cm tall, sometimes taller, erect or diffuse, with slender, usually suberect branchlets, branchlets sparsely to densely pubescent with minute, fringed scales or coarse, stellate hairs, pubescence usually denser on pedicels. *Stipules* usually linear-oblong to oblong, mucronate; sometimes obovate, usually erect but sometimes falcate, 4–11 mm long, 1–2 mm broad, stellate, glabrescent. Leaves usually fascicled, subsessile or very shortly petiolate; blade broader at or near apex, cuneate, from 5–25 mm long, 3–10 mm broad, lowermost sometimes larger, apex rounded or truncate with a small, slightly recurved mucro and usually 2–6-toothed, larger, apex rounded or subtruncate with a small, very rough with tubercle-based hairs, matching the phrase "Flores purpureo-violacei," which applies under Hyptis.*

As the PRE specimen is in better condition than either of the other two specimens give the impression of being of hybrid origin. The leaves are usually in fascicles in the wild. The specimen figured in Hort. Schoenbr. and the pressed specimen in the Vienna herbarium show the leaves as not fascicled. This may be due to the plant being young. Other plants collected later in the same garden have fascicled leaves.

A specimen from the "Hortus Schoenbrunnensis" preserved in the National History Museum, Vienna, bearing the name *H. flammaea*, agrees with Jacquin's description and plate and is therefore here selected as lectotype.

**H. orophila** Eckl. & Zeyh. is based on their No. 369, collected at "Hottentottsholland" (Stellenbosch) and "Zwartberg et Klynniviersberge" (Caledon).

Judging by three specimens seen with this number, none of which has a specific locality, there are two distinct entities involved. Two specimens, one in PRE and the other in SAM, are obviously conspecific with *H. flammaea*, having the dark petals, the characteristic pubescence on the calyx and the fringed scales on the branchlets. The third sheet, in S, is a smaller plant with petals obviously yellow and the branchlets very rough with tubercle-based hairs, matching *H. rudis*. In the description of *H. orophila*, the only item which points to one or other of the two entities is the phrase "Flores purpureo-violacei," which applies to the PRE and SAM specimens and not to the S specimen. As the PRE specimen is in better condition than the one in SAM, the former is selected as the lectotype.

Found on mountain slopes, stony hills and in valley bushveld. Recorded from western coastal Renosterbosveld, in the Somerset West, Stellenbosch and Paarl Districts.


Characterized by the petals usually appearing darker than the calyx on dried specimens, and by the leaves being broadest at or near the apex with the majority toothed at the apex, usually long cuneate and sublaxly pubescent with scales fringed with short hairs or coarse stellate hairs, usually glabrescent and rough with the bases of the hair-groups, or the stellate pubescence persisting on some broad-leaved forms or persisting on the margins only; calyx rough from the tubercled bases of the hairs, lobed to about midway, the lobes oblong-deltoid or deltoid from a broad base, often with the apical portion infolded at first and eventually at least some spreading. This feature gave rise to the description of the species *H. falcata*, now considered a synonym. The flowers are usually dark red, but a few yellow flowers were also recorded. Some specimens give the impression of being of hybrid origin. The leaves are usually in fascicles in the wild.

A specimen from the "Hortus Schoenbrunnensis" preserved in the National History Museum, Vienna, bearing the name *H. flammaea*, agrees with Jacquin's description and plate and is therefore here selected as lectotype.

**H. orophila** Eckl. & Zeyh. is based on their No. 369, collected at "Hottentottsholland" (Stellenbosch) and "Zwartberg et Klynniviersberge" (Caledon).

Judging by three specimens seen with this number, none of which has a specific locality, there are two distinct entities involved. Two specimens, one in PRE and the other in SAM, are obviously conspecific with *H. flammaea*, having the dark petals, the characteristic pubescence on the calyx and the fringed scales on the branchlets. The third sheet, in S, is a smaller plant with petals obviously yellow and the branchlets very rough with tubercle-based hairs, matching *H. rudis*. In the description of *H. orophila*, the only item which points to one or other of the two entities is the phrase "Flores purpureo-violacei," which applies to the PRE and SAM specimens and not to the S specimen. As the PRE specimen is in better condition than the one in SAM, the former is selected as the lectotype.

**H. orophila** is included in synonymy under *H. flammaea*.

82. **Hermannia flammaula** Harv. in F.C. 1: 196 (1860). Type: Cape, Caledon; Zeyh. 2009; (K, lecto; PRE, photo.; Z; PRE!).


Suffrutex, erect, virgate, with slender branchlets leafy towards their apices, 25–60 cm tall, rarely 1 mm tall, branchlets pubescent with tubercle-based stellate hairs or fringed scales, intermixed with single, thin-walled, gland-tipped hairs. *Stipules* linear-oblong or very narrowly ovate-oblong, 2–8 mm long, 0,75–2 mm broad, stellate-pubescent with a few gland-tipped hairs, intermixed. *Leaves* sub sessile, petiole rarely up to 2,5 mm long; blade narrowly oblong-cuneate, usually folded, 7–15 mm long, rarely up to 22 mm long, 1,5–4 mm broad near apex, apex rounded,
with gland-tipped hairs interspersed. Calyx about 4 mm long, lobed to or almost to middle, tube at first narrowed at mouth but eventually wide and shallow, lobes acute from a deltoid base, sinuses wide, coarsely crenate at the apex. Stamens 4, filaments 1-2 mm long, anthers ciliate. Petals red, partly yellow within, "dark red", "bright red", or "dark purple", twisted, about 8 mm long, blade oblong, abruptly narrowed below middle into a claw with infolded margins, edges of claw thinly tomentose. Stamens about 4 mm long, anthers somewhat shorter than hyaline, more or less oblong filaments; filaments shortly overlapped by anther bases. Ovary about 2 mm long, shallowly 5-lobed and 5-umbonate at apex, stellate-hairy; stipe under 1 mm long; styles cohering, about 3 mm long; stigma capitulate, usually conspicuous. Capsule about 4.5 mm long, stellate-hairy, bluntly 5-angled, 5-umbonate at apex; stipe 1 mm long, umbos 1 mm long.

Found on sandy flats and stabilized dunes in Coastal Fynbos. Recorded from Caledon through Bredasdorp to Mossel Bay.

**H. patula** Harv. in F.C. 1: 187 (1860). Type: Cape, specimen in Herb. Lamarck s.n. (P, holo.; PRE, photo.).

- 84. *Hermannia scabra* Cav., Diss. 2, t. 182, fig. 2. (1788); DC., Prodr. 1: 495 (1824), partly excl. syn.; Harv. in F.C. 1: 191 (1860). Type: Cape, specimen in Herb. Lamarck s.n. (P, holo.; PRE, photo.).

**H. scorodifolia** sensu Eckl. & Zeyh., Enum. 43, No. 344 (1834).

**H. denudata** sensu Eckl. & Zeyh., Enum. 43, No. 345 l.c.

**H. presliana** sensu Turcz. in Byull. mosk. Obshch. 32, 1: 259 (1859). Type: Cape, "Paarlberg", Zeyher (sic) 7294 (for Drêge 7294); (K; PRE, photo.;!; PRE!; S! LE!, W!).

**H. joubertiana** Harv., in F.C. 1: 196 (1860). Type: Cape, Bredasdorp, Soetendalsvallei, Joubert s.n. (S-Herb. Sond., holo.; PRE, photo.1.).

Suffrutex, low spreading bush to stiffly erect shrublet up to 60 cm tall; branches fairly finely stellate-pubescent with intermingled gland-tipped hairs to sparingly and harshly stellate-pubescent, the hairs appressed or spreading, 1 to few from a basal tuberule. *Stipules* ovate to oblong-ovate from a broad base, sometimes obliquely cordate at base, 2-6 mm long, 1.5-3 mm broad at base, sparsely stellate-pubescent. *Leaves* shortly petiolate; blade cuneate from near apex or from midway, 2.5-40 mm long, varying in width from 2-15 mm broad at or near apex, lobed in upper half or at apex only, sparingly and harshly stellate-pubescent, hairs often 1 from the tubercled base, especially on the margins, glabrescent especially on upper surface which is finely dotted with minute tubercles or glands; petiole 1.5-5 mm long. *Inflorescence* of long, leafless, racemose or paniculate cymes terminal on branchlets, cymes 1- or 2-flowered, internodes 10-44 mm long; peduncles 2-20 mm, stellate-pubescent; pedicels 2-10 mm long; bracts like stipules but reducing upwards.

**83. Hermannia joubertiana** Harv. in F.C. 1: 196 (1860). Type: Cape, Bredasdorp, Soetendalsvallei, Joubert s.n. (S-Herb. Sond., holo.; PRE, photo.1.).

Characterized by the persistently stellate-pubescent, small leaves, the mixed pubescence, some stellate hairs with thick walls (hard looking) but mostly thin-walled hairs (tomentose?), simple gland-tipped hairs usually intermixed. *Inflorescence* of 1-2-flowered cymes, one or two terminal on branchlets and appearing axillary when ultimate branchlets are very short; peduncles 1-4 cm long; pedicels unequal in a cyme, 2-8 mm long, densely and softly pubescent with gland-tipped hairs interspersed; bracts usually 3, linear to subulate, about 3.5 mm long and up to 0.5 mm broad, acute with a few erect hairs at apex. Calyx about 7 mm long, lobed to just beyond the middle, stellate-pubescent, densely and with more than with gland-tipped hairs present as well, rarely glabrescent. Petals red, partly yellow within, "dark red", "bright red", or "dark purple", twisted, about 8 mm long, blade oblong, abruptly narrowed below middle into a claw with infolded margins, edges of claw thinly tomentose. Stamens about 4 mm long, anthers somewhat shorter than hyaline, more or less oblong filaments; filaments shortly overlapped by anther bases. Ovary about 2 mm long, shallowly 5-lobed and 5-umbonate at apex, stellate-hairy; stipe under 1 mm long; styles cohering, about 3 mm long; stigma capitulate, usually conspicuous. Capsule about 4.5 mm long, stellate-hairy, bluntly 5-angled, 5-umbonate at apex; stipe 1 mm long, umbos 1 mm long.

Characterized by the cuneate leaves usually folded and pubescent dorsally, sparsely stellate to glabrescent, hairs minute, apex mucronate, the average not toothed or lobed at the apex. The calyx is small and shallow with acute lobes and wide sinuses. Flowers usually red, small, petals about twice as long as the calyx.

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**54 REVISION OF HERMANNIA SUBGENUS HERMANNIA IN SOUTHERN AFRICA**

Acocks & Voorhansbosch, "Zwartberg", attachment; anthers ciliate. Inland, from Ladismith to Uniondale. Caledon District eastwards to George and, further inland, from Ladismith to Uniondale.

**REVISION OF HERMANNIA SUBGENUS HERMANNIA IN SOUTHERN AFRICA**

**REVISION OF HERMANNIA SUBGENUS HERMANNIA IN SOUTHERN AFRICA**

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mucronate or subtruncate and lobed, persistently stellate-pubescent on both sides, either coarsely so with hairs short or long, or densely so with long, thin-walled hairs (tomentose?), simple gland-tipped hairs usually intermixed. *Inflorescence* of 1-2-flowered cymes, one or two terminal on branchlets and appearing axillary when ultimate branchlets are very short; peduncles 1-4 cm long; pedicels unequal in a cyme, 2-8 mm long, densely and softly pubescent with gland-tipped hairs interspersed; bracts usually 3, linear to subulate, about 3.5 mm long and up to 0.5 mm broad, acute with a few erect hairs at apex. Calyx about 7 mm long, lobed to just beyond the middle, stellate-pubescent, densely and with more than with gland-tipped hairs present as well, rarely glabrescent. Petals red, partly yellow within, "dark red", "bright red", or "dark purple", twisted, about 8 mm long, blade oblong, abruptly narrowed below middle into a claw with infolded margins, edges of claw thinly tomentose. Stamens about 4 mm long, anthers somewhat shorter than hyaline, more or less oblong filaments; filaments shortly overlapped by anther bases. Ovary about 2 mm long, shallowly 5-lobed and 5-umbonate at apex, stellate-hairy; stipe under 1 mm long; styles cohering, about 3 mm long; stigma capitulate, usually conspicuous. Capsule about 4.5 mm long, stellate-hairy, bluntly 5-angled, 5-umbonate at apex; stipe 1 mm long, umbos 1 mm long.

Found on sandy flats and stabilized dunes in Coastal Fynbos. Recorded from Caledon through Bredasdorp to Mossel Bay.

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**H. saccata** Cav., Diss. 2, t. 182, fig. 2. (1788); DC., Prodr. 1: 495 (1824), partly excl. syn.; Harv. in F.C. 1: 191 (1860). Type: Cape, specimen in Herb. Lamarck s.n. (P, holo.; PRE, photo.).

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**H. scorodifolia** sensu Eckl. & Zeyh., Enum. 43, No. 344 (1834).

**H. denudata** sensu Eckl. & Zeyh., Enum. 43, No. 345 l.c.

**H. presliana** sensu Turcz. in Byull. mosk. Obshch. 32, 1: 259 (1859). Type: Cape, "Paarlberg", Zeyher (sic) 7294 (for Drêge 7294); (K; PRE, photo.;!; PRE!; S! LE!, W!).

**H. joubertiana** Harv., in F.C. 1: 196 (1860). Type: Cape, Bredasdorp, Soetendalsvallei, Joubert s.n. (S-Herb. Sond., holo.; PRE, photo.1.).

Suffrutex, low spreading bush to stiffly erect shrublet up to 60 cm tall; branches fairly finely stellate-pubescent with intermingled gland-tipped hairs to sparingly and harshly stellate-pubescent, the hairs appressed or spreading, 1 to few from a basal tuberule. *Stipules* ovate to oblong-ovate from a broad base, sometimes obliquely cordate at base, 2-6 mm long, 1.5-3 mm broad at base, sparsely stellate-pubescent. *Leaves* shortly petiolate; blade cuneate from near apex or from midway, 2.5-40 mm long, varying in width from 2-15 mm broad at or near apex, lobed in upper half or at apex only, sparingly and harshly stellate-pubescent, hairs often 1 from the tubercled base, especially on the margins, glabrescent especially on upper surface which is finely dotted with minute tubercles or glands; petiole 1.5-5 mm long. *Inflorescence* of long, leafless, racemose or paniculate cymes terminal on branchlets, cymes 1- or 2-flowered, internodes 10-44 mm long; peduncles 2-20 mm, stellate-pubescent; pedicels 2-10 mm long; bracts like stipules but reducing upwards.
lower ovate-cordate or oblique at base, about 8 mm long, reducing to very narrowly lanceolate bracts about 2 mm long, usually 3 at apex of peduncle, central the largest 4.5 x 3.5 mm, lateral 2.5 x 1.5 mm. 

Calyx 6 to 7 mm long, lobed to about midway, at fiber stalk pubescent especially on nerves, usually coarsely so with hairs from a raised base, sometimes more finely stellate with intermingled gland-tipped hairs, with age becoming glabrescent and scarious; lobes deltoid often ciliate with long hairs; sinuses wide, at least at mature flowers. Petals bright yellow turning reddish brown with age, about 10 mm long, orbicular to oblong in upper third, narrowing into a claw which is pubescent, especially on margins.

C. R. E. 

Attention, p. 61).

Characters reminiscent of other species, such as a

lobing which is usually in the upper half but sometimes ciliate with stellate or tufted hairs. 

Florescence terminal on ultimate branchlets, 1- or more 2-flowered cymes arising from a fascicle of leaves, stipules and bracts; peduncles 4–10 mm long, stellate-pubescent; pedicels 2–6 mm long, stellate-pubescent; bracts linear-acute, about 5 mm long, 1 mm broad, ciliate. 

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C. R. E. 

Characters reminiscent of other species, such as a
The great variation in leaf-shape and pubescence suggests that this species has crossed with related species in the same area, the characteristic calyx being a dominant feature. Murr 1456 (PRE), named "H. glabraceulis" (ill. in "Eckl." sensu Eckl. & Zeyh., partly, as to H. orophila sensu E Eckl. & Zeyh., Enum. 356 and sensu Reichb., l.c. Descr. Pl. Cult. t. 68 fig. 1, is H. hyssopifolia L.

None of the Ecklon & Zeyher specimens named H. trifurca L. belongs to the Linnaean species. Some are H. flammula (e.g. Zeyher 2009 in PRE! and Z!) and others H. angularis (e.g. Zeyher 2006 and 2007 in PRE! and Z!).


*H. orophila* sensu Eckl. & Zeyh., partly, as to Ecklön & Zeyher Enum. 369 (SI; PRE, photo.). non Eckl. & Zeyh. (see note under *H. flammula*).

Low suffrutex, branching at base, branches spreading, ascending, sub-branched, upper ultimate branches short, rough, fairly sparsely stellate-pubescent or hispid with a few stiff hairs from a tubercle. *Stipules* lanceolate to oblanceolate, narrowly ovate-oblong or ovate, acute, 3–7 mm long, 0.5–3.5 mm broad. *Leaves* sessile or with a petiole up to 7 mm long; blade obovate-cuneate, 10–25 mm long 6–15 mm broad, broadly rounded to subtruncate and coarsely toothed at apex, roughly stellate-pubescent on both surfaces, glabrescent, often hispid on margins with stiff hairs from a tubercle. *Inflorescence* of 1–2-flowered cymes in the axils of upper and sub-terminal leaves of branches and the many, short, lateral branchlets; peduncles and pedicels very short, rarely up to 3 mm long. *Calyx* often red (not visible in dried specimens), hispid, especially on veins, with tubercle-based hairs, 7–8 mm long, lobed to midway, lobes oblong and abruptly narrowed into an apex which is incurved (calyx lobes look truncate). *Petals* twisted, "pink", "pale yellow", "yellow-orange", 7–8.5 mm long, scarcely or shortly exserted from calyx; limb oblong narrowing about midway and then produced below into a fairly broad claw with infolded margins, pubescent at middle on rim with tubercle-based hairs. *Stamens* with hyaline filaments, oblong, slightly narrowed to base, about 3.3 mm long; anthers 2 mm long. *Capsule* bluntly pentagonal, lobes rounded at apex, hispid with tufted hairs on angles and apex, finely stellate-pubescent or glabrescent between angles.

Found in Coastal Fynbos or Renosterbos, in dry sandy soil in rocky areas and on slopes, usually facing the sea. Recorded from a restricted area in the southern part of the Cape Peninsula and around False Bay, and outliers further east at Potberg, Swellendam District and near Caledon.


This species is characterized by the rather coriaceous calyx, which is often red and has the tips of the lobes infolded giving them a truncate appearance. The pubescence is harsh, mostly of tufts of stiff hairs on a raised tubercle. The flowers, which are very short stalked, grow in the axils of the sub-terminal leaves and so appear to be in heads at the ends of the branchlets. The degree to which the calyx is exserted from the calyx varies and is not combined with any other difference. It may even be due to the age of the flower for, while the petals are still tightly rolled, they seem to be farther exserted. The variety *exserta* is therefore not upheld here.


*H. bipinnata* Burch., Trav. 1: 310 (1822). Type: Cape, *Prieska, Moddergat, Burchell 1627* (K, holo.; PRE, photo.; PRE!; LE!).

*H. multifida* DC., Prodr. 1: (1824), nom. superfl.; Harv. in F.C. 1: 204 (1860). Type: as for *H. bipinnata* Burch.

*H. halacalaba* DC., Prodr. 1: 493 (1824); Harv. in F.C. 1: 204 (1860). Type: *Cape, Prieska, Asbestos Hills, Burchell 2020* (K, holo.; PRE, photo.; PRE!; LE!).

Subshrubaceous perennial, a low, bushy, leafy plant with several to many slender stems from a woody base; stems and branches densely to subluxately canescent with silvery strigose and appressed stellate hairs, hairs fine and many from a central scale, minute glandular hairs often present. *Stipules* subulate and some upper ones linear-lanceolate, 3–10 mm long, sub laxly stellate-pubescent. *Leaves* basal and cauline, petiolate; blade 10–40 mm long, pinnately to palmately divided to midrib or almost so, pinnae divided again with ultimate lobes obtuse and decurrent, densely to subluxately appressed-pubescent; petiole 5–40 cm long. *Inflorescence* of 1–2-flowered cymes, terminal on branchlets and in axils of upper leaves, forming lax, leafy, racemose cymes; flowers few and large; peduncles 5–20 mm long; pedicels 3–7 mm long; bracteoles oblong and abruptly narrowed into a rather broad claw which is incurved at base and has broad, infolded margins, pubescent at middle on rim with tubercle-based hairs. *Stamens* with hyaline filaments, oblong, slightly narrowed to base, about 3.3 mm long; anthers 2 mm long. *Capsule* bluntly pentagonal, lobes rounded at apex, hispid with tufted hairs on angles and apex, finely stellate-pubescent or glabrescent between angles.

Also in Botswana.

Found on stony hills, in sand pockets between quartzite rock, on the edge of lime plateaux, among asbestos hills. Recorded from the Orange River basin in the Prieska and Klein Karoo Districts northwards through Hantsoo and Gordonia to South West Africa as far north as the Windhoek and Gobabis Districts. Also in Botswana.

Resembles *H. comosa* in some respects but is readily distinguished by the consistently densely divided leaves. *H. abrotoanoides* is characterized by the silvery stellate pubescence, together with the inflated calyx which is appressed stellate-pubescent, the hairs fine and many from a silvery central scale, some very shortly stalked as well and these are readily caducous. *H. pulvcrata* has the same silvery stellate pubescence and resembles *H. abrotoanoides* in the divided leaves but it can be distinguished mainly by the calyx which is not inflated.

The type figure is of a plant originally from the Cape, grown in the Herrenhaus en Garden. No specimen of the plant figured has been traced. There is a specimen in S which can be looked upon as authentic. It came from Lehmann's herbarium labelled "Missit Wendland. Cult. horto Herrenhusiano". Unfortunately the specific name is given as "abrotanifolia" instead of "abrotoanoides", evidently by mistake.


*H. argentea* Sm. in Rees, Cycl. 17 (1819); DC., Prodr. 1: 496 (1824); Eckl. & Zeyh., Enum. No. 47 No. 375 (S). Prieska: Vogelstruisbult, H. Bolus 6192 (PRE!; SAM!).

Subherbaceous perennial, about 30 cm tall or, if the stem is big, stellate-pubescent, 5-lobed; stipe short, up to 2 cm long, "khaki yellow", "indigo to cream", "dirty yellow turning golden brown", tightly curled (flowers appear half closed and truncate on dried specimens), "dark yellow", "oblong-obovate", narrowing in lower parts and consists of strigose and sometimes gland-tipped hairs, the stellate hairs radiating from a central silvery scale. In most upper parts the silvery stellate hairs, the stellate hairs from a central, silvery scale, often minute, reddish, gland-tipped hairs, lobed to almost half, up to 0.75 mm long; styles 4-5 mm long. Capsule up to 8 mm long, appressed stellate-pubescent especially along sutures, remains of perianth persisting at base only.

Found in karroid scrub, karroid broken veld and false upper karoo, in vlei, shaly river valleys and rocky kloofs. Recorded from Worcester eastwards to Alexandria and northwards through Calvinia and Griqualand West through the Cape midlands to Fauresmith and Rouxville in the southern Orange Free State.

89. *Hernmania procumbens* Cav., Diss. 329, t. 177, fig. 2 (1788). Type: Cape, "Groenekloof infra Leeuwestaart", *T. V. Burger* s.n. (MA, holo.; PRE, photo.; UPS, Herb. No. 15490, PRE, photo.!).

Subrubaceous perennial, about 30 cm tall or, if protected, taller, stems 1 to several from a woody base (or many after being heavily grazed), erect or spreading-sprawling, sparsely branched above, silvery canescent with strigose and appressed stellate pubescence, the stellate hairs from a central, silvery scale, often minute, gland-tipped hairs present. *Stipules* subfleshy, up to 10 mm long, ovate to ovate-oblong, broadly to narrowly so, often cordate at the base and oblique, silvery appressed stellate-pubescent. *Leaves* basal and cauline, petiolate; blade variable in shape and degree of lobing, broadly to narrowly ovate-oblong in outline, from coarsely lobed to pinnatipartite, pinnatifidapartite or palmatifidapartite, silvery stellate pubescent to thinly so, lobes obtuse and decurrent; petiole 3–15 mm long.

Characterized by the silvery, scaly pubescence which forms a complete, smooth covering on the stems in the lower parts and consists of strigose and stellate hairs, the stellate hairs radiating from a central silvery scale. In most upper parts the silvery stellate hairs and scales are less dense and often scattered, and minute reddish gland-tipped hairs are present as well. The leaves, and to a lesser extent, some other species, especially among species that were formerly in the genus *Mahernia*, vary considerably in the degree of lobing. In some specimens the leaves are merely coarsely lobed while in others, or even on the same plant, they can be deeply lobed. In this species they vary from subentire to coarsely lobed to pinnatifidapartite, pinnatifidapartite or palmatifidapartite.

Andrews, when describing this species, referred to it as the "powdered Hernmania".

89. *Hernmania procumbens* Cav., Diss. 329, t. 177, fig. 2 (1788). Type: Cape, "Groenekloof infra Leeuwestaart", *T. V. Burger* s.n. (MA, holo.; PRE, photo.; UPS, Herb. No. 15490, PRE, photo.!).

Suffruticeous, stems one to many from a woody base, decumbent, slender, sparingly branched at base and sometimes with a few, short, ascending branchlets produced in axils of leaves along the trailing stem, new growth with appressed stellate pubescence, white, upper internodes long. *Stipules* ovate-oblong, ovate-lanceolate, semi-obilocular, 2–4 mm long, 1.5–2.5 mm broad, broadly acuminate to abruptly narrowed into an acumen, occasionally rounded at apex. *Leaves* usually solitary at a node, upper distant, petiolate; blade 10–35 mm long, varying in shape and degree of lobing, from oblong-cuneate and coarsely lobed to bi- or tri-pinnatifide and then fragile, fairly sparsely stellate-pubescent, glabrescent; petiole 3–15 mm long. *Inflorescence* of...
few-flowered, leafless, racemose cymes, terminal on ascending branches and branchlets; flowers secund and often crowded at apex; pedicels short, up to 5 mm long. Calyx 5-7 mm long, from broadly campanulate (sub-inflated) and about half as long as petals to narrowly campanulate (not at all inflated) and more than half as long as petals, lobed to above the middle, lobes either broad-based and rounded with an acute apex, or deltoid to narrowly oblong and lobed down to the middle and the lobes broad-based. Stamens about 6.5 mm long, with narrow to fairly broad, obovate-cuneate, hyaline, glabrous filaments about 4 mm long; anthers 3 mm long, ciliate.


Characterized by the decumbent habit with one to several slender stems from a woody base, the lower leaves oblong-cuneate and fairly coarsely lobed, the upper often narrowly oblong and lobed down to half the breadth of the leaf or in specimens from northern areas even deeper, but not to the midrib (pinnafitted), the subspurcse, apressed, stellate pubescence of the young growth, the inflorescence of few-flowered, leafless, racemose cymes terminal on the ascending branches and branchlets, flowers secund and often crowded at the apex, the broadly campanulate (subinflated?), glabrescent calyx usually about half as long as the petals and lobed to above the middle and the lobes broad-based. Recorded from the Cape Peninsula, around Table Bay and one record from near Bok Point in the Malmesbury District.

—Bellville: Melkbostrand, Dahlstrand 1044; about 45 km N. of Cape Town on Mamre road, Lewis in SAM 6579. Malmesbury: near Bok Point, Compton 9410 (NBG). Peninsula: Milberton, Adamson 2605 (BOL); near Greenpoint, Ecklon in Herb U.I. 395. Presl, when describing H. leucanthemoideae and H. zeyheriana, stated that Drêge 2316 (W!; LE!) and 7310 (W!; LE!) were the true H. procumbens Cav. He then described Ecklon & Zeyher. Enum. No. 329 as H. zeyheriana Persl and Ecklon in Herb. U.I. 395 as H. leucanthemoideae Presl. Several sheets in different herbaria, Ecke! & Zeyher. Enum. No. 329 (MO!; BOL!; S!; LE!) and Ecklon in Herb. U.I. 395 (S!; W!) have been seen and they are true H. procumbens Cav. The Drêge specimens seen by Presl are correctly cited by Harv. in F.C. 1, No. 2316 (W!; LE) under Mahernia pulchella (L.f.) Cav. and No. 7310 (W; LE) under Mahernia linearis Harv. Sheets of these Drêge numbers have been seen in W and LE and they are not H. procumbens Cav.

Previously subspecies procumbens had only been recorded from around Table Bay which is some distance from the southernmost record of subsp. myrrhifolia. But in 1940 a specimen of typical H. procumbens, Compton 9410, was collected at the 7th Gate to Bok Point, which lies in the heart of the distribution area of subsp. myrrhifolia. This supports the decision to regard these elements only as subspecies. It may be due to cultivation or chance that more specimens of both subspecies have not been recorded from the intervening gap. In the inflorescence the two subspecies are the same and both show a tendency to turn blackish in parts on pressed specimens. For the features in which they differ see subsp. myrrhifolia.

(b) subsp. myrrhifolia (Thunb.) De Winter in Bothalia 11: 264 (1974). Type: Cape, Swartland, Thunberg Cat. No. 15487 (UPS, holo.; PRE, photo.!). H. myrrhifolia Thunb., Diss. Herm. 16 (1794); Fl. Cap. 508 (1825). Type: as above.


This subspecies differs from the typical subspecies mainly in the leaves and calyx. The leaves are pinna­tisect with pinnate pinnae lobately, some lobes decurrent (they are never oblong and coarsely lobed with upper narrow and pinnatifid as in subsp. procumbens). The calyx is usually narrowly campanulate in subsp. myrrhifolia and slightly more than half the length of petals whereas in subsp. procumbens it is broadly campanulate and about half as long as petals. This subspecies is on the whole more fragile than the typical, especially the leaves; the internodes appear longer and the tendency to turn blackish on pressing is more apparent.

Found along the Cape west coast from Malmesbury District to Clanwilliam. Recorded from the Swartland, especially near Saldhana Bay and northwards to Lambert's Bay.

—Bellville: Monte Vista, Esterhuyzen 32494a. Clan­william: Van Putten's Vlei, Gillett 4058; Zuurfontein, Schlechter 8549. Malmesbury: Swartland, Thunberg s.n. (S); Mamre Hill, Compton 14928 (NBG); Ysterfontein, Compton 13734 (NBG); near Darling, Schlechter 5339 (SAM).

Records of this subspecies are found in very few herbaria. This is probably owing to the fragile nature of the plant and to the extensive cultivation in the Swartland, Malmesbury district, which is evidently its main distribution area. It would seem that Thun­berg's species was lost sight of by most reviewers, possibly because the name was misapplied by Ecklon & Zeyher. Their No. 407, mentioned in the Enume­ration under the name Mahernia myrrhifolia (Thunb.) Spreng., is not this species but H. diffusa (=H. pilosulla Harv.).

So it happened that Salter came to describe the species H. pinnatisecta. His specimens exactly match the type of H. myrrhifolia Thunb.

Tower, Ecklon & Zeyher. Enum. No. 374 (BOL, holotype; SI; LE!; SAM!).

_H. tenuifolia_ sensu Eckl. & Zeyh., Enum. 47, No. 374 (1834); sensu Harv., in F.C. 1: 203 (1860), non Sims.  
_H. coronopifolia_ sensu Eckl. & Zeyh., Enum. 47 No. 377 (1834), non Link. (SI; SAM!).


Suffrutex, erect, becoming much branched and sprawling with age, up to 60 cm tall, branched from base; branches and branchlets rather slender with fairly sparse, appressed, stellate hairs and long, pointed hairs spreading from a minute, bulbous base, minute, gland-tipped hairs also sometimes present, the long hairs caducous. _Stipules_ 2-6 mm long, ovate to narrowly ovate, often broad and oblique at base, the auricles somewhat thickened. _Leaves_ 10-25 mm long, one or more at a node, pinnately lobed to bi-pinnately lobed above, narrowing into a petiol-like base up to 1 cm long, sparsely stellate-hairy. _Inflorescence_ of 1- to 2-flowered cymes arranged in slender, leafless, lax, racemose cymes terminal on branchlets, cymes 1 to 2 at a node; peduncles 1-4.5 cm long, sparsely stipulate-pubescent, glabrous or with minute, gland-tipped hairs, usually straight and suberect, usually shorter than internodes; pedicels short, 3-4 mm long, cernuous; bracts like stipules, narrowly ovate to ovate with a broad attachment, shallowly cordate or often oblique with one side deeply cordate, auricles somewhat thickened, acute or acuminate, glabrous or with a few long hairs which fall readily; bracteoles small and often united at base, 1.5-2.5 mm long. _Calyx_ campanulate, lobed to almost middle, about 6 mm long, glabrous; lobes acute. _Petals_ bright yellow turning red-orange with age, strongly twisted, about 10 mm long, the sub-obiculate upper half oblique at base where it narrows into a long claw with infolded margins, minutely pubescent in central area on inner face. _Stamens_ about 6 mm long with obovate hyaline filaments, pubescent on shoulders which are overapped by anther bases. _Ovary_ about 3 mm long, 5-angled, stellate-hairy; stipe up to 1 mm long; styles about 8 mm long. _Capsule_ 6-7 mm long, 5-lobed, shortly exserted from the persistent calyx, stellate-pubescent at least on sutures and at apex; styles fairly persistent.

Found on river flats and mountain slopes. Recorded quite frequently from Caledon eastwards to Swellendam and northwards through Robertson, Worcester and Stellenbosch to Piketberg and in eastern Clanwilliam.

_Cape._—Caledon: Zwarteburg, Schlechter 5557; Hartebees rivier, Zeyher 2001; Ecklon & Zeyher Enum. 374 (LE; W).  

In the past this species has very generally been named _H. tenuifolia_. Sims. In 1946 Captain Salter pointed out that the specimens cited by Harvey in the _Flora Capensis_, together with a number of more recently collected examples, differ from Sims’ species. Sims states in the text of the _Botanical Magazine_ t. 1348 (1811) that the plate had been prepared some years before from a plant believed to have been in the possession of the late Mr Curtis. No specimen was preserved and, since it has not been exactly matched with any known South African species, _H. tenuifolia_ is now considered an insufficiently known species.

_H. confusa_ differs from its nearest relative, _H. procumbens_ subsp. _myrrophila_, in its erect habit and its inflorrescence of lax racemose cymes with long, suberect peduncles which are usually somewhat shorter than the internodes. It is also characterized by the fairly shallow, glabrous calyx with the petals exserted from the tube by more than half, often showing the claw with its stellate hairs.

In his original description of _H. confusa_ Salter did not clearly indicate _Ecklon & Zeyher_ Enum. No. 374 as the holotype. He did, however, mention this specimen first and added BOL in brackets after it. In the rest of the work Salter always indicated in brackets behind the first cited specimen that it is the type and also the herbarium in which it is housed. It is thus assumed that the omission of the word type is merely an error.

_Synthypes:_—Namaqualand, *Ius*, Schlechter 11403 (PRE!; Z!; W!; SI; LE!); Keuzabies, 18/6/1898, *M. Schlechter* s.n. or sometimes given as No. 106 (K1; PRE!; Z!; LE!; SI).


Suffrutex, stems several to many from a woody base, sparingly branched near base; branches sparsely to very sparsely and minutely appressed stellate-pubescent, the hairs radiating from central scales or glands, scattered minute papillae sometimes present, glabrescent, sometimes central scales or glands persistent. _Stipules_ small, narrowly ovate to ovate-deltoid, broad at base, 1.5-2 mm long, stellate-pubescent and sparsely ciliate with long, pointed hairs, glabrescent. _Leaves_ mostly basal, sparse and reduced above, petiole; blade more or less oblong from narrowly to broadly so, or ovate-oblong, coarsely and unevenly lobed, sometimes deeply so but never to midrib, lobes usually broad and obtuse, not or occasionally lobed again, 3-5-angled, or acuminate. _Inflorescence_ of 1- to 2-flowered cymes arranged in erect, terminal, leafless, racemose or paniculate cymes; peduncles 20-30 mm long, glabrescent; bracteoles like small stipules, usually 3; pedicles 2.5-6 mm long, stellate-pubescent with minute, scattered glands or papillae. _Calyx_ campanulate, about 4.5 mm long, lobed to almost middle, teeth deltoid and sinuses wide, stellate-pubescent and with minute, scattered scales or papillae, glabrescent in upper half only, lobes ciliate with slightly longer stellate hairs. _Petals_ yellow to orange-red, about 5.5 mm long, suberobic in upper half, usually broader than long, narrowed into a fairly broad claw with inrolled margins, appears glabrous but sometimes with minute hairs. _Stamens_ about 5 mm long, with obovate, hyaline filaments; anthers almost as long as filaments, overlapping them at base, acute, ciliate. _Ovary_ about 2.5 mm long, stellate-pubescent on sutures, papillate between; stipe about 0.5 mm long; styles 3 mm long, persistent, often appearing subclavate at apex. _Capsule_ about 6 mm long and almost as broad, shallowly 5-lobed, stellate-pubescent sometimes persisting on sutures, papillose between hairs, persistent styles still united and appear subclavate at apex (hence the abandoned manuscript name _rhopalostylys_).
Found on sandy flats and in dry river beds in the drainage basin of the lower Orange River. Recorded from Namaqualand and in South West Africa in the Warmbad and Lüderitz Districts.

Cape.—Namaqualand: I'us, Schlechter 11403; Keuzabies, M. Schlechter 106; S of Goodhouse, Schleiden 9100.

S.W.A.—Lüderitz: Sendelingsdrift, Merxmüller & Giess 3261, Warmbad: Sperlingspitz, Giess, Volk & Bleissner 7012; Witpiuts, Merxmüller & Giess 3635.

Closely related to *H. paucifolia* and differs mainly in the shape and lobing of the leaf and size of the flowers. In *H. macra* the flowers are small, the majority up to 6 mm long on dried specimens, whereas in *H. paucifolia* they are up to 10 mm long. The leaves in *H. macra* are more or less oblong, from narrowly to broadly so, and coarsely and unevenly lobed, rarely deeply lobed but not to the midrib, whereas in *H. paucifolia* the leaves are ovate and the lobing is usually to the midrib so that most of the lower leaves are palmatisect. Both these species are characterized by being fairly small, 30-50 cm tall, with several stems from a woody base and with leaves mostly basal and an inflorescence of practically leafless, glabrous, racemose or paniculate cymes. The styles which cohere and persist, appear subclavate and this probably accounts for the unpublished specific name *H. rhopalostylys*. The name "macra", the "Meagre Hermannia" was chosen instead when the species was published in 1919.


Subherbaceous, stems several to many from a woody base, erect, sparingly branched just above base, densely stellate-pubescent at base with long white hairs and inconspicuously stellate-pubescent, often with scattered, very minute glands, especially in upper portion. *Stipules* ovate-lanceolate to linear-lanceolate, somewhat acinaciform, 5-20 mm long, stellate-pubescent. *Leaves* petiolate, mostly basal with 1 or 2 distant leaves on lower half of branches; blade oblong-lanceolate to narrowly lanceolate, coarsely crenate or toothed, 20-60 mm long, 8-15 mm broad, occasionally luxuriant plants with larger leaves (Giess 13555), stellate-pubescent, at first densely so with long matted white hairs, later sparsely so with shorter, appressed hairs, nerves prominent below, usually 3 from base; petiole 7-27 mm long. *Inflorescence* of 1-2-flowered cymes, arranged in erect, leafless, lax, terminal, racemose cymes; cymes 1 to 2 at a node; peduncles suberect, 15-35 mm long, appearing glabrous but usually with scattered, minute, subsessile glands; bracts like stipules, though somewhat smaller, bracteoles often 3, 1.5-5 mm long; pedicels slender, 5-15 mm long. *Calyx* 8-9 mm long, campanulate, wide at mouth, thin becoming papery, appears glabrous but has minute scattered glands and occasionally a few stellate hairs, toothed in upper half, sinuses wide. *Petals* golden yellow becoming orange-red with age, 8-9 mm long, oblong-orbicular in upper half, narrowing into a fairly broad claw with narrowly infloded margins, glabrous in specimens dissected. * Stamina* 6 mm long with obovate-oblong, hyaline filaments; anthers acute, ciliate, slightly longer than filaments. *Capsule* about 8 mm long, enclosed in faded petals and calyx, 5-lobed, stellate-pubescent; style persistent.

Found "on the flats", in deep sandy soil, "among Acacias", "among Mesembryanthemum". Recorded from the Rehoboth and Maltahöhe Districts in South West Africa.

S.W.A.—Maltahöhe: form Schwarzkupe, Giess, Volk & Bleissner 5215, Rehoboth, Büllspoor, Dinter 2098 (SAM); Strey 2085, Keuzabie, Büllspoor, Dinter 8321 (S; PRE); Jorjo Flats, Strey 2339; Naukluft, Hardy 1960.

A low, subherbaceous plant with many short, erect, thin, pubescent stems from a woody base, sparsely branched just above the base. Characterized by the basal leaves with only one or two stems in the base in the lower half of the plant, and the leafless upper half which bears the comparatively large flowers in lax racemose cymes, the calyx, which is campanulate, with a wide mouth and appears glabrous although minute glands and occasional stellate hairs may be present.


H. dissecta Harv. ms. in syn. in F.C. 1: 204 (1860). Type: as for *H. paucifolia* Turcz.

Suffrutex, stems several to many, bushy, from a woody base, branched at base and sparingly above, branches glabrous or with a few hairs or minute glandular hairs, rarely finely stellate-pubescent. *Stipules* small, broadly ovate to ovate-lanceolate, 1.3-5.5 mm long, glabrous or sublexially pubescent, some hairs on margins long. *Leaves* mostly basal with a few distant and somewhat reduced leaves above, petiolate; blade 15-30 mm long, usually palmatisect with segments pinnately and unevenly once or twice lobed, lobes mostly rounded at apex, leaves rarely ovate and palmately armed with margins shallowly to deeply lobed, upper and lower surface glabrous or sparsely to densely stellate-pubescent with minute stellate hairs, upper surface sometimes glabrescent; petiole 10-35 mm long. *Inflorescence* of 1-2-flowered racemose or paniculate cymes, terminal on main branches and on a few lateral branches which arise from distant upper, much reduced leaves; peduncles suberect, up to 16 mm long; bracts short and broad, often united at base, about 1 mm long; pedicels 2.3-3.5 mm long, often minutely glandular-pubescent. *Calyx* campanulate, wide at the mouth, about 6.5 mm long, lobed almost to middle, minutely stellate-pubescent, glabrescent with only a few minute glandular scales at base. *Petals* yellow to orange, at some stages red, about 10 mm long, the upper third oblong-orbicular, narrowing into a long claw with infolded margins, rounded or slightly lobed where blade narrows into claw, appears glabrous but sometimes minute stellate pubescence and papillae obvious on inner face of claw. *Stamina* united at base around stigma, about 7 mm long with oblong hyaline filaments narrowing slightly to base; anthers ciliate 4 mm long, about as
long as filaments and shortly overlapping them at base. *Ovary* about 4 mm long, entirely stellate-pubescent or only on sutures, papillate between, sutures narrowing slightly to base; stipe 1 mm long; styles about 5 mm long, exerted and persistent, appearing slightly clavate at apex. *Capsule* 7–10 mm long, minutely papilllose between sutures, sometimes stellate on sutures and at apex, persistent calyx and stamens at base obscuring stipe, persistent styles at apex.

Found in the western mountainous karoo, the arid upper karoo,Namaqualand and south-western South West Africa. Recorded from Victoria West westwards to Calvinia and northwards to Namaqualand and the Lüderitz District in South West Africa.


**S.W.A.—Lüderitz: Aus, *Dinter* 6072; *Marloth* 5079; between Tsurub and Grassspforte, *Schenck* 124 (PRE; Z); *Gobaxab*, between Aus and the Orange River, *Schenck* 342 (Z); *Klinghardt Mis, Dinter* 3884.

Characterized by the mainly basal leaves, ovate in outline and often deeply palmatisect, and the almost leafless, terminal, paniculate cymes. Closely related to *H. macroa*. For distinguishing features see under that species. The distribution of these two species overlap and some specimens appear to be intermediate. For the present the treatment in F.S.W.A. is followed here and the two species are kept separate. *Dinter* 3884, which in F.S.W.A. is doubtfully included in this species because of the shallowly lobed, densely stellate leaves, matches a specimen from Groetdorp collected by Pillans (No. 5324), with the note "luxuriant growth result of growing in deep sand in a watercourse". Among the specimens examined these two gatherings are linked to the palmatisect leaves by here included in *H. macroa*.

The type gathering, *Zeyher* 118, is represented in several herbaria. All those seen are poor specimens. It is not known which, if any, of these specimens were seen by Turczaninow.

*Drège* specimens in LE and W which are this species have, evidently in error, the specific name "chrysanthemoides" on the label. According to Veterinary Services, Onderstepoort, these plants cause excessive purging in animals—common names are Skitterybossie, Purgurbossie, Skitterybossie, Pururbossie, Scholtzbossie and Governmentsbossie. In the Agricultural Journal (1893), it is claimed that it is used to cure Bushman of a craving for drink.

**SPECIES REQUIRING FURTHER ATTENTION**


The sheet of *Drège* 7267 in PR comprises two elements. The specimen on the left is *H. mucronulata* Turcz., and from the description in Bot. Bemerk. it is clear that this is the specimen that Presl referred to as *H. velutina* Eckl. & Zeyh. The specimen on the right which is considered to be the holotype of *H. bracteosa* Presl, does not agree with any specimens known to me. The leaves are velvety as in *H. velutina*, but the inflorescences matches *H. salviifolia* var. *grandistipula* Harv., which has coarsely stellate leaves. This seems to point to the holotype being of hybrid origin.


The type specimen of this species is in the Botanical Museum, Berlin-Dahlem. A photograph of the type specimen was sent to this Institute and later a flower and upper leaf was sent on loan. It appeared that in all probability the species was conspecific with *H. procumbens* Cav. and matched fairly well Lewis in SAM 65797 under *H. procumbens* subsp. *procumbens*. However, it seems wise to investigate further, especially since the procumbent habit is not mentioned and cannot be judged from the specimen. The sign on the specimen indicated that it was woody but not necessarily procumbent.


Type: Cape, Cedarberg, *Diels* 862 (B. ho.!). From the description this species may be synonymous with *H. scabra*.


The specimen figured in Refug. Bot. 3: 195 together with a specimen in LE labelled "Ex horto bot. Petropolitana 66.5" and named *H. polymorpha* Eckl. & Zeyh. were most puzzling. In 1975 a specimen from Kew was brought to my notice. It matched the above and was said to have appeared spontaneously in the Royal Botanic Gardens, Melbourne, Australia. That means no original locality was known for any of these and since they did not match any of the thousands of southern African species examined, it seemed probable that South Africa was not the country of origin. In 1976 a specimen from the Bolus Herbarium, that had been overlooked when the collection from that herbarium was sent on loan to this Institute, was received here. It matches the above specimens and is labelled *Gillet* 1452 from '"Avontuur, edge of Plateau, above Bidou River, Knysna". It may be a good species near *H. angularis* or a sport or form of that species.

5. *Hermannia urceolata* Pillans MS.

Pillans evidently originally intended naming this species *H. hollandii*, but the name is scored out in his manuscript and "urceolata" written in its place. The specimens cited are as follows: "Port Elizabeth Drive, Cape Road, St. Alban's Farm, *Holland* 4062 (type in Bolus Herb.); 15th Mile Cape Road, Long 5056; without precise locality, *Cruden* 465; *Bolus* 3055; Baakens River Valley, *Kensit* 2". These sheets have been seen in the Bolus Herbarium. The number of Long's specimen is mistakenly printed as "5056", which is the genus number. The correct number is Long 1302. *Cruden* 465 and *Kensit* 2 have been found to be *Hermannia suavis*. Although Pillans's MS species resembles both *H. suavis* and *H. salviifolia* var. *grandistipula* in the urceolate calyx with rather long, white, stellate hairs and in the general leaf shape and size of stipules, it differs from both in the distinct stellate pubescence on the lower surface, with the hairs long, whitish and multicellular, giving the leaves a fringed look around the margin when viewed from above. To date, field observations have not been carried out in order to establish whether it is a distinct species.
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<tr>
<td>tenulifolia sensu Eckl. &amp; Zeyh.</td>
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<tr>
<td>tenudipes Engl.</td>
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<td>tephrocarpa K. Schum.</td>
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<td>ternifolia Presl</td>
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<tr>
<td>ternifolia sensu ex Harv.</td>
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<tr>
<td>tigrensis Hochst. ex A. Rich. (&quot;ligreens&quot;)</td>
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<tr>
<td>tomentosa (Turcz.) Schinz ex Engl.</td>
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<tr>
<td>var. brevifolia Engl.</td>
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<td>trifoliata L.</td>
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<td>trifurca L.</td>
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<td>trifurca sensu Eckl. &amp; Zeyh.</td>
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<td>urceolata Pillans MS.</td>
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<td>velutina DC.</td>
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<td>vestita Thumb.</td>
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<td>viscosa hiern</td>
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<td>viscosa sensu Burtt Davy</td>
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<td>windhukiana Engl.</td>
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<td>Mahernia L.</td>
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<td>draeadiplodia Eckl. &amp; Zeyh.</td>
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<td>hilaris Eckl. &amp; Zeyh.</td>
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<td>Tricanthera modesta Ehrenb.</td>
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