

Stapelieae from South Tropical Africa, V*

by

L. C. Leach

ABSTRACT

The generic position of *Huernia verekeri* Stent and some related species is discussed. *H. verekeri* Stent var. *pauciflora* Leach is described, also several putative hybrids of *H. verekeri*. Three new combinations are made, viz. *H. tanganyikensis* (Bruce & Bally) Leach (*Duvalia tanganyikensis* Bruce & Bally), *H. procumbens* (R. A. Dyer) Leach (*Duvalia procumbens* R. A. Dyer) and *H. andreaeana* (Rauh) Leach (*Duvalia andreaeana* Rauh).

The discovery of a creeping variety of *Huernia verekeri* Stent, which appeared to be very close to *Duvalia* Haworth, led the writer to examine carefully the generic position of the group of related taxa which included *Duvalia tanganyikensis* Bruce & Bally, *D. procumbens* R. A. Dyer, *D. andreaeana* Rauh and *Huernia schneideriana* Berger; the conclusions reached, from the study of a relatively large quantity of material as well as of the published descriptions and figures, are set out below.

Huber in Prodr. Fl. S.W. Afr. 114: 38 (1967) suggests that *H. verekeri* should be considered to be a *Duvalia* rather than a *Huernia* and includes it in his keys to both genera. There seemed, at first sight, no reason why the new variety should not be placed in *Duvalia* and yet the typical variety appeared to be correctly placed in *Huernia* as did also the closely related *H. schneideriana*.

However, although many of the generic distinctions in the *Stapelieae* are somewhat arbitrary, it is considered that, in the two genera concerned, there are good diagnostic criteria on which they may be satisfactorily separated. An analysis now follows, with the characters arranged in order of relative reliability, the above-mentioned somewhat controversial species being temporarily omitted.

DUVALIA

- (1) Corona stipitate
with the outer corona resting on the rim or sides of the annulus (i.e. closing what corresponds to the tube in *Huernia*)
No exception known
- (2) Stem teeth with a pair of denticles (stipules) at the base of the leaf
One exception: D. sulcata N. E. Br.
- (3) Corolla lobes replicate, at least to some extent (occasionally only slightly folded towards the apex)
Exceptions: D. sulcata with slightly convex lobes and possibly some specimens of *D. polita* var. *parviflora*

HUERNIA

- Corona sessile
with the outer corona, when present, closely appressed to the base of the tube
No exception known
- Stem teeth without denticles
No exception known
- Corolla lobes not replicate, usually to some extent channelled or canaliculate towards the apex, sometimes flat or convex
No exception known

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|---|--|
| (4) Corolla lobes usually ciliate, at least to some extent
<i>Exceptions: D. elegans, D. pubescens</i>
and possibly <i>D. radiata</i> | Corolla lobes not ciliate
<i>No exception known</i> |
|---|--|

No. 4 is not particularly useful, as the cilia are frequently lost when specimens are preserved, nevertheless when they are present then *Duvalia* seems definitely to be indicated.

Omitted from the above analyses as not being diagnostic in the present context are:—

Raised annulus:—occurring in both genera

Intermediate lobes:—occurring in both genera to some extent although usually much more prominent in *Huernia*

Corona shape:—the outline of the outer corona and the form of the inner lobes are closely matched in both genera

Pollinia:—do not appear to display any generic morphological correlation

Note:—No trace of denticles was found in any of the *Huernia* species examined, particular attention being paid to species considered to be closely related to, or with stems somewhat similar to those of *D. tanganyikensis* etc.

D. sulcata: despite appearing twice as an exception appears to be correctly placed in *Duvalia* on its remaining morphological criteria, and moreover, fails entirely to qualify for consideration for any other genus.

On the evidence of the foregoing, it is considered that, although closely related, separation of the two genera is not only amply justified, but that they may possibly prove to be the most distinctly differentiated in the whole tribe.

It remains now to consider the position of the taxa excluded from the foregoing analyses.

D. tanganyikensis, *D. procumbens* and *D. andreaeana*: In all three species the coronas are sessile, the stem teeth devoid of denticles and the corolla lobes neither replicate nor ciliate.

From this it appears that the only way in which they approach *Duvalia* is in the shape of the corolla with its raised annulus; at first sight the flowers do have a *Duvalia*-like appearance, particularly those of *D. procumbens*, but this seems to be quite superficial. The shallowness of the tubes contribute to this appearance but cannot be considered to be at all significant, as may be demonstrated by comparison with the almost flat corolla of *H. marnieriana* Lavranos which is undoubtedly correctly generically placed; furthermore the corolla lobes of all three are either channelled or have a tendency to become canaliculate.

It appears, therefore, that these taxa should be transferred to *Huernia* with the diagnostic characters of which they entirely agree, while their stems are also comparable with those of such species as *H. aspera* N.E. Br., *H. erinaceae* Bally and *H. repens* Lavranos.

H. verekeri and *H. schneideriana*: On analysis these both fail to comply with any of the requirements of *Duvalia* as set out above while agreeing in all respects with those of *Huernia*; there seems every reason, therefore, why these should be retained in *Huernia*.

This proposed rearrangement of three species, it should be noted, requires no amendment to the existing generic circumscription of *Huernia*, moreover "corona stipitate" vs. "corona sessile" may be used as a key character for the separation of the genera, alternatively "stem teeth with denticles" vs. "stem teeth without denticles" may serve with almost equal accuracy.

Phytogeographic considerations also lend some support to the presently proposed transfers as, although *Huernia* "blankets" a vast area, *Duvalia* is, with the exception of *D. polita* N. E. Br. and *D. sulcata* N. E. Br. (Arabia), restricted to the southern and south-western portions of Africa. *D. polita* is now known to be distributed from Angola to Mozambique and from Natal to Zambia, its territory including practically the whole of that of *H. verekeri*, so that we have the interesting situation where two species, one from each of these closely related genera, occupy the same area and habitats and yet, despite the hybridising propensities of *H. verekeri* when in contact with other *Huernia* species, not one case of suspected hybridisation with *D. polita* has been reported from this most extensive area.

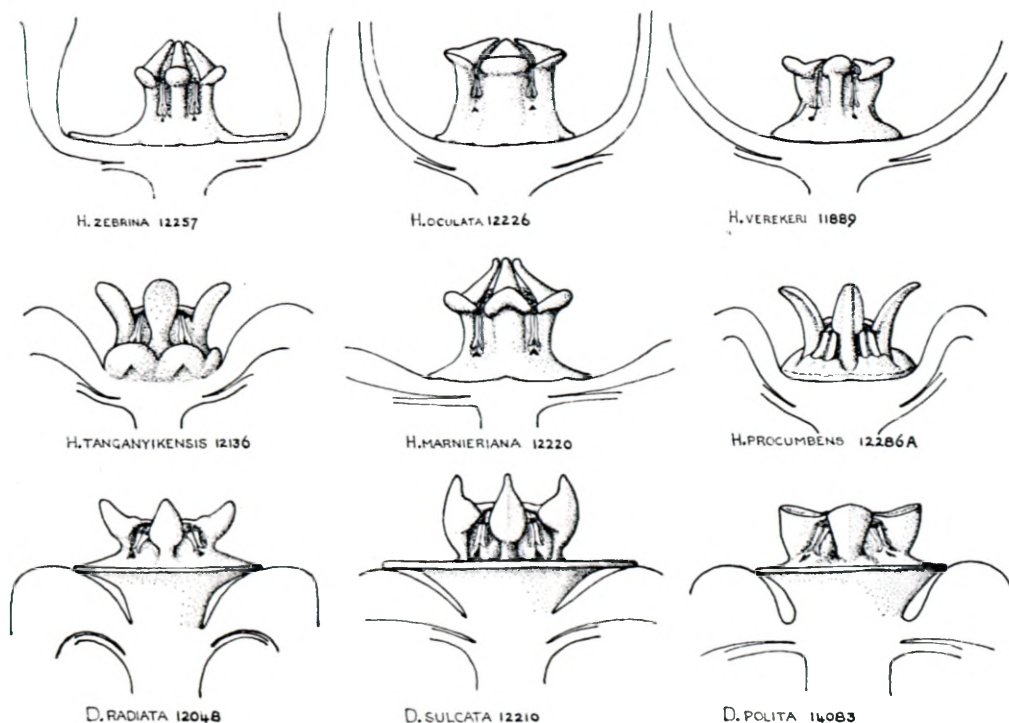


FIG. 1.—A comparison of some characteristic *Huernia* and *Duvalia* coronas with corolla sections. Drawn from specimens in the author's spirit collection, as follows:— 12257 *Huernia zebrina*, Moamba, Mozambique; 12226 *H. oculata*, Usakos, S.W. Africa (*Hardy* s.n.); 11889 *H. verekeri* var. *pauciflora*, Mambone, Mozambique; 12136 *H. tanganyikensis*, Mt. Longido, Tanzania (comm. R.D. *Bayliss*); 12220 *H. marnieriana*, Arabia (*Lavranos*); 12286A *H. procumbens*, Nuanetsi, Rhodesia; 12048 *Duvalia radiata*, Ladismith (*Bayliss* 1912); 12210 *D. sulcata*, Aden (*Lavranos* 1068); 14083 *D. polita* var. *parviflora*, Pietersburg (*Plowes* 2635). All $\times 4$ approx.

On making a study of material and especially of living plants of *Huernia verekeri* Stent, one is immediately struck by the remarkable uniformity of floral characters displayed by this species. Despite its wide distribution only slight variations have been noted, these being restricted to the precise outlines of the corona and the dimensions and depth of colour of the corolla.

In all species of the genus known to the author the variation in the shape of the outer corona is such as to render that organ virtually valueless for diagnostic purposes, at or below specific level. *H. verekeri* is no exception in this respect and the lobed form on

which White & Sloane based their variety *stevensonii* has been found to occur in widely scattered individuals, sometimes as an individual aberrant among flowers with the more usual subcircular corona; it has not been possible, therefore, to uphold this variety.

Size of flowers, at least within this species, seems to be almost, if not entirely, a matter of nourishment, as may be seen from the comparison between wild and cultivated specimens of *Wild & Drummond* 6921.

Generally the species is of very scattered occurrence but, in favourable seasons, large concentrations of plants have been found in the Sabi Valley of Rhodesia, particularly in the vicinity of Birchenough Bridge.

Near the mouth of the Save (Sabi) River in Mozambique a vegetative variant occurs, which, despite its entirely different stems and habit, is considered to be best treated as being only of varietal rank, especially as it seems possible that the one small population found may be of clonal origin.

Huernia verekeri Stent in Kew Bull. 1933:145 (1933); Phillips, Flow. Pl. S. Afr. 15: t. 591 (1935); White & Sloane, Stap. 3:848 (1937); Luckhoff, Stap. S. Afr. 199 (1952); Jacobsen, Handb. Succ. Pl. 2:630 (1960); Huber, in Prodr. Fl. S. W. Afr. 114:38 (1967). Type: Rhodesia, Sabi Valley, *L.S.A. Vereker* 5427 (K. holo.; PRE!).

H. verekeri var. *stevensonii* White & Sloan, l. c. 850, 1145 (1937); Jacobs., l. c. (1960). Type: Rhodesia, Nyamandhlovu District (No specimen appears to have been preserved).

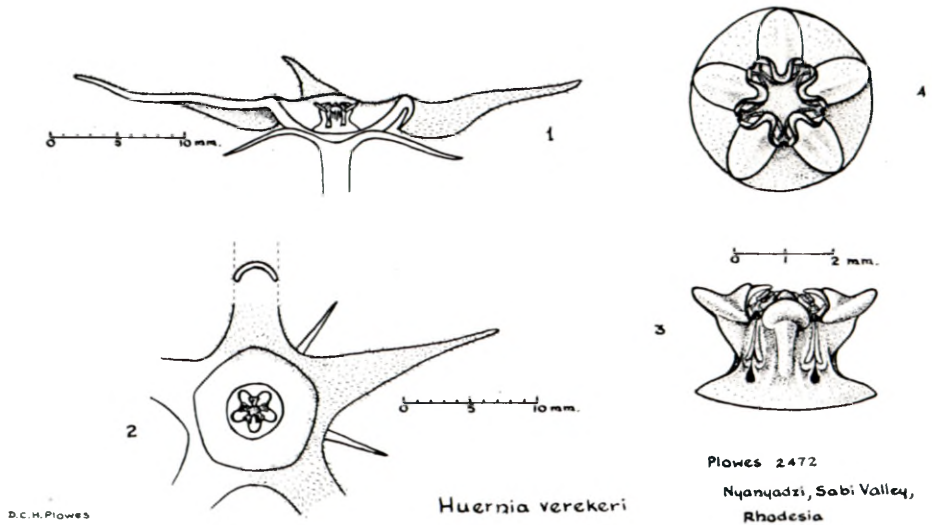


FIG. 2.— ***Huernia verekeri*** var. *verekeri*. 1, section of corolla with corona; 2, portion of flower from above; 3, corona, side view; 4, corona, from above. All Plowes 2472.

The relationship of this species appears to be broadly with the taxa of the *H. macrocarpa* Sprenger affinity, such as *H. oculata* Hook. f. and *H. schneideriana*, while there is also a close relationship between the new variety and *H. procumbens* (the transfer of which from *Duvalia* is effected elsewhere in this paper).

From *H. oculata* and *H. schneideriana* this widespread taxon may immediately be distinguished by its narrowly attenuate corolla lobes and its entirely different coloration; in addition the long, attenuate sepals usually much exceed the corolla sinuses and, together with the attenuate lobes, impart a rather spidery appearance which it shares with *H. procumbens*, and which is quite unlike that of any of its other relatives.

The typical variety is almost certainly nearest in overall characters to *H. schneideriana* which also has similar short acute hairs clothing the limb and lobes. The possibility that this latter species is of hybrid origin is discussed elsewhere in this paper.

Var. *pauciflora* seems to be closest, in many ways, to *H. procumbens* from which it is easily distinguished by its more open, larger tube and lack of a prominent annulus.

var. **verekeri**

Plant succulent, dwarf, caespitose, glabrous, usually very floriferous. *Stems* up to 10 cm high, 1-25 cm diam. excluding the teeth, 5-7, usually 6-angled, sharply sulcate between the strongly toothed angles; teeth spreading, deltoid acuminate, up to 15 mm high, laterally much compressed when young. *Inflorescence* from near the base of the younger stems, flowers opening more or less successively, produced from a stout cuspidate peduncle. *Pedicel* c. 10 mm long, glabrous. *Sepals* 5-8 mm long, narrowly ovate attenuate, usually much exceeding the sinuses of the corolla. *Corolla* c. 3-5 cm diam., outside glabrous, whitish at the base becoming pale green above, usually flushed pink; *tube* more or less hemispherical, c. 3 mm deep, inside whitish at the base becoming suffused with maroon above, deepening to the dark maroon, subcircular or obtusely pentagonal annular rim, 6.5-8 mm diam., sharply dividing the tube from the limb; *limb* and lobes pale greenish yellow, covered with short, stout, acute, maroon hairs; *lobes* horizontally spreading, c. 5 mm wide at the base, 15 mm long, attenuate, markedly convex on the upper surface; *intermediate lobes* small, strongly reflexed, so that they are usually visible only from beneath. *Outer corona* c. 3 mm diam. subcircular or obscurely lobed (rarely distinctly 5-lobed), closely appressed to the base of the tube, glabrous, ivory. *Inner corona* lobes closely incumbent on the anthers, but shorter than them, with a flattened, broadly rounded or somewhat sharply ovate, spreading dorsal gibbosity which tapers sharply into the somewhat obtuse, raggedly pubescent apex, usually slightly suffused with pink. *Pollinia* yellow-brown (appearing dark brown in their cells), attached to the winged, dark brown carrier by translucent red-orange connectives.

BOTSWANA.—Ngamiland, between Nokareng and Aha hills, *Wild & Drummond* 6921 (SRGH), idem cult. SRGH (K; PRE; SRGH), cult. Nelspruit (NBG).

S. W. AFRICA.—Okavango, Andara, near Caprivi Strip, *Giess* 9576 (HSA; M).

ZAMBIA.—Feira: near Feira, *Fanshawe* 9424 (SRGH).

RHODESIA.—N. Darwin: Mt. Darwin, *Bingham* s.n. cult. SRGH 3176 (K; LISC; SRGH). Sipolilo: 5 miles west of Kanyemba *Müller & Kerr* 362 (SRGH). Binga: Mwenda Research Station, cult. SRGH, *Grosvenor* 123 (SRGH); *ibid.* *Mitchell* 910 (SRGH). W. Nyamandhlovu: Tjolutjo Rd., 50 miles north-west of Bulawayo, *Plowes* s.n. (PRE); Rochester Farm, cult. Nelspruit, *Leach & Bullock* 13199 (HSA; M; NBG; NDO; Z); Farm Burford; *Paterson* in Herb. Bul. Mus. 32 (SRGH). Plumtree: Nata River, *Davies* in SRGH 23215 (SRGH); 6 miles west and 6 miles north-west of Plumtree, *Bullock* 141; 147 (SRGH). Wankie: Deka Rd., *Levy* s.n. (PRE); Lukosi River, *Geise* s.n. (PRE); Wankie, *Paterson* in Herb. Bul. Mus. 50 (SRGH). E. Chipinga: Sabi Valley, *Vereker* in SRGH 5427 (PRE); *ibid.* *Vereker* s.n. (PRE); *Thorncroft* s.n. in PRE 19574 (PRE); near Birchenough Bridge, *Obermeyer* in TRV 37493 (PRE), *ibid.* *Leach* 5579 (PRE; SRGH). *Leach* 9972 (SRGH). Melsetter: Hot Springs, *Vereker* in Herb. Eyles 7631 (SRGH); Biriwiri, *Plowes* 2560 (PRE; SRGH); Umvumvumu River, cult. Nelspruit, *Plowes* sub *Leach* 12313, (K; SRGH); ± 10 miles north-east of Birchenough Bridge, *Leach & Müller* 13140 (SRGH). Umtali: Maranke Reserve, *Robinson* in SRGH 41637 (SRGH). S. Bikita: Bikita, *Wild* 4422 (PRE; SRGH); Moodie's Pass, *Leach* 9768 (PRE; SRGH); near Birchenough Bridge, *Stock* in SRGH 20039 (SRGH); *ibid.* *Hall* 1138 (NBG). Gwanda: Mwewe River, *Bullock* 105 (PRE; SRGH); Gwanda, *Paterson* in Herb. Bul. Mus. 302-307 (G; K; PRE; Z). Ndanga: Gurudzi River, 9 miles north of Chipinda Pools, *Bullock* 134 (SRGH). Nuanetsi: Lundi River, *Taylor* in NBG 563/51 (NBG), *ibid.* cult. Nelspruit, *Cannell* sub *Leach* 13799 (K; LISC). Some of the Chipinga District records are not precisely located by the collectors and have been allocated to that district on the score of probability.

MALAWI.—S. Province, Mpatamanga Gorge, *Leach* 5637; 10591 (SRGH).

MOZAMBIQUE.—Tete: Mesuza, *Chase* 2820A (SRGH).

var. **pauciflora** Leach, var. nov.

A varietate typica caulibus repentibus multo longioribus, angulis obtusis, dentibus parvissimis distantioribus; floribus paucioribus facile distinguenda.



PLATE 1.—*Huernia verekeri*. Plant from Nyamandhlovu District, Rhodesia, showing the variation in the shape of the tube (*Plowes* 1901). Photo: D. C. H. Plowes.

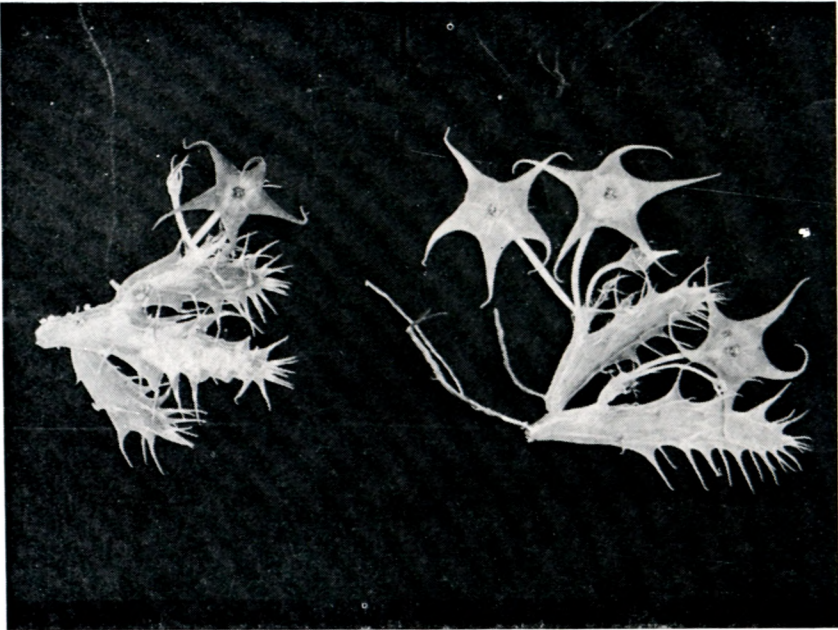


PLATE 2.—*Huernia verekeri*. Comparison of wild and cultivated (right) specimens. Botswana (*Wild & Drummond* 6921).

Type: *L. C. Leach & R. D. Bayliss* 11889 (SRGH, holo.; K; LISC; PRE).

MOZAMBIQUE.—Sul do Save: Save River near Mambone, alt. c. 3 m, cult. Nelspruit, *Leach & Bayliss* 11889 (K; LISC; SRGH), idem cult. PRE (PRE).

Var. *pauciflora* was found growing under heavy shade in a thicket to the south of Mambone, near the mouth of the Save River, on slightly rising ground in an area of mangroves and swampy tidal inlets, and is known only from this locality (similar plants have recently been reported from the lower Sabi Valley, but as no material exists it has not been possible to confirm this report).

It was at first thought that the elongated creeping stems of these plants might be developed only under the heavy shade conditions under which they were discovered but when placed in cultivation at Nelspruit under varying degrees of shade, they have retained their characteristic habit (eventually not thriving unless heavily shaded), as have also those cultivated at both the Botanical Research Institute, Pretoria, and the National Botanic Gardens, Kirstenbosch. Plants of the typical variety have likewise retained their normal floriferous, caespitose habit in cultivation.

Var. *pauciflora* differs from the typical variety in being a sparingly branched, creeping plant with very much longer stems with rounded angles and much smaller more distantly spaced teeth; flowers are borne very much more sparingly towards the base of the younger parts; in these respects the plant is very different from the floriferous, strongly toothed, erect, dwarf clumps of var. *verekeri*.

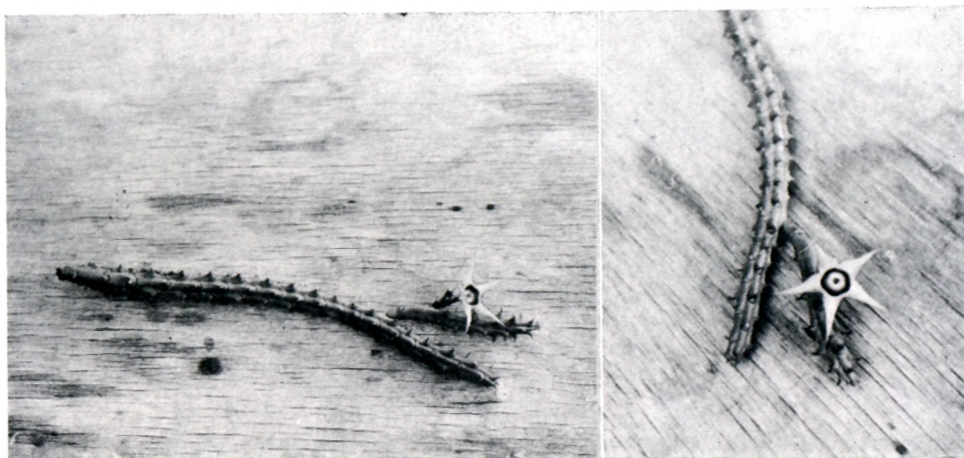


PLATE 3.—*Huernia verekeri* var. *pauciflora*. Cult. Nelspruit (*Leach & Bayliss* 11889).

It has become apparent that *H. verekeri* tends to hybridize freely with its neighbours and, from a study of such putative hybrids, it appears that the dominant characters of *H. verekeri* are:—

1. Stems with a tendency to a greater number of angles and longer, more acuminate teeth.
2. Tube shallow, more or less hemispherical.
3. Limb and lobes of the corolla clothed with short, acute, maroon hairs.
4. Outer corona tending to be less deeply lobed.
5. Inner corona lobes with an enlarged dorsal gibbosity.
6. Shape of pollinia and particularly of the connectives.

The general form of the inner corona, the papillation and the coloration appear to be mainly inherited from the other parent.

Some field records of putative hybrids follow:—

H. verekeri × *H. hislopilii* subsp. *hislopilii*

Assumed crosses of this parentage show little variation, so much so, that but for the accident of a similar hybrid occurring spontaneously in the Salisbury garden of an observant collector/gardener (Mr. J. A. Whellan), where only *H. verekeri* and *H. hislopilii* were previously cultivated, this particular cross might easily have been published as a distinct species. The accumulated evidence however, leaves little doubt regarding its parentage.

RHODESIA.—Gwanda: near Tuli, cult. Nelspruit, *O. West* sub Leach 11681A (BOL; G; HSWA; K; LISC; M; NBG; NDO; PRE; SRGH; Z). Buhera: Matendera Ruins, cult. Umtali, *Walters* sub Plowes 2636 (SRGH). Umtali: Maranke Reserve, *Plowes* 2577 (PRE; SRGH).

H. verekeri × *H. hislopilii* subsp. *robusta*

Very similar to crosses with the typical subsp., but the corona leaning more towards *H. hislopilii* and the papillae larger and more dense.

RHODESIA.—Nyamandhlovu: Rochester Farm, *Leach & Bullock* 13200 (SRGH).

H. verekeri × *H. longituba* subsp. *cashelensis*

These assumed hybrids, unlike the foregoing, show considerable variation, as is perhaps to be expected, as *H. longituba* is itself rather variable. Some examples bear a remarkable resemblance in corolla shape to *H. schneideriana*, particularly is this evident in *Leach* 5405 and *Plowes* 2470, both from the same vicinity.

RHODESIA.—Melsetter: Mutambara, *Leach* 5405 (PRE; SRGH); *ibid.* cult. Nelspruit, *Plowes* 2470 (PRE; SRGH).

Huernia schneideriana Berger in *Monatsschr. Kakt.*, 23: 177 (1913); White & Sloane, l.c. 844 (1937); Jacobsen, l.c. 629 (1960). Type: Tanzania ("Nyassaland"), Rungwe District, Kyimbila ("Kimbila am Nordend des Nyassa-Sees"), *Stolz* 1407 (B†). Neotype: Hort. bot. Monacensis, fl. 31. 10. 1927 (M!).

The type of *H. schneideriana* was a living plant collected by Adolf Stolz at Kyimbila (c. 9°20'S, 33°35'E), which was sent to Berger by the Dahlem gardener Strauss. It seems fairly certain that if herbarium material was prepared by Berger it would have been destroyed during World War II.

Unfortunately only one herbarium specimen seems to have survived. This is preserved at München (M), and is said to have been prepared from the original imported plant and has therefore, been selected as the neotype.

The species is believed to have attained an extensive distribution in cultivation (presumably all clonal divisions of the original gathering) but it is now, apparently, rare in collections.

It has not been possible, in the absence of material, either to confirm or confound the Mozambique localities tentatively mentioned by White & Sloane, (l.c.), but that of Mangulane in the Lourenço Marques District seems particularly doubtful.

Plant tufted, stems c. 5 cm high, 1–1.2 cm diam., generally 6-angled, with relatively small acute teeth about 3 mm high, 16 mm apart along the angles. *Flowers* few, from near the base of the stems, borne on short glabrous pedicels. *Sepals* glabrous, c. 3.5 mm long, 1.25 mm wide. *Corolla* shallowly campanulate, c. 2.5 cm across the points of the lobes; *tube* more or less hemispherical, glabrous, blackish purple inside; *lobes* c. 7 mm long, deltate, acute; both limb and lobes clothed with short, acute, blackish maroon

hairs. *Outer corona* c. 3 mm diam., dark purple, scarcely lobed, slightly undulate on the margin. *Inner corona* with lobes closely incumbent on the anthers but shorter than them with a broadly rounded, more or less flat, spreading dorsal projection.

The above description is based partly on the original description by Berger and partly on the München material.

In view of the fact that *H. schneideriana* has apparently been collected only once and remembering its apparently vigorous qualities, it is thought that the possibility of hybrid origin should be considered. If this possibility is accepted, then consideration of the dominant characters of *H. verekeri* in putative hybrids of that species would suggest it as one of the possible parents, since most, if not all, these dominant characters are possessed by *H. schneideriana*; while its other characters would seem to indicate that the other parent should be sought amongst the dark-flowered species such as *H. aspera* and *H. keniensis*.

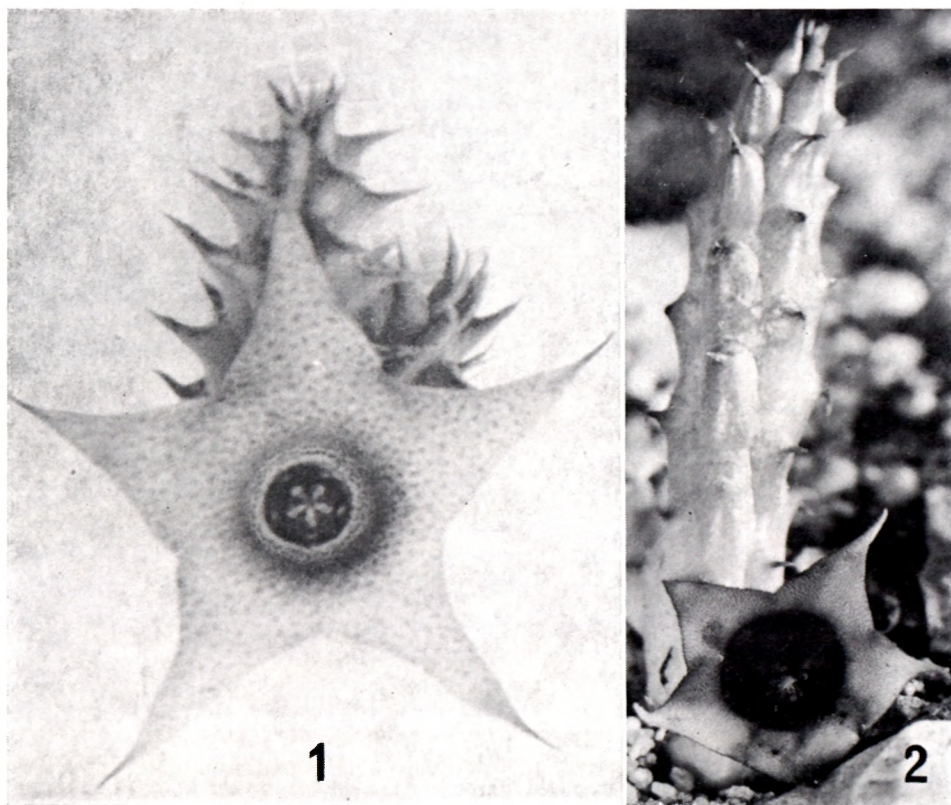


PLATE 4.—1, *Huernia verekeri* × *H. longituba* subsp. *cashelensis*. Melsetter District, Rhodesia (*Leach* 5405); 2, *H. schneideriana*. Cult. "Les Cedres". Photo: M. J. Marnier-Lapostolle.

What amounts to almost certain confirmation of this hybrid origin theory has recently been received from Professor G. Reese in a paper entitled, "Untersuchungen über die Chromosamenzahlen der Stapelieae" [G. Reese u. H. Kressel, in *Port. Act. Biol. Ser. A*, 10: 33 (1967)], in which a specimen identified as *H. schneideriana* has been found to be a triploid; in the same article *H. verekeri* is listed as a diploid and a variety of one of the other suggested possible parents is reported as a tetraploid.

The probability of *H. schneideriana* being of hybrid origin is, therefore, of a very high order indeed, while that *H. verekeri* should be one of the parents seems, on the morphological evidence, to be of only a slightly lesser order of probability.

The geographical isolation of *H. schneideriana* from the suggested parents may be more apparent than real, as neither northern Mozambique nor southern Tanzania has been intensively botanised, so that it is quite possible that both may occur, without however having been recorded in herbarium collections.

***Huernia tanganyikensis* (Bruce & Bally) Leach, comb. nov.**

Duvalia tanganyikensis Bruce & Bally in Cact. & Succ. J. Amer. 13: 179, tt. 114, 115 (1941); Bally in J. E. Afr. Nat. Hist. Soc. 16: 160, t. 53 (1942); Bruce in Flow. Pl. Afr. 28: t. 1082 (1950); Jacobsen, Handb. Succ. Pl. 1: 363 (1960); Rauh in Kakt. u. and. Sukk. 12: 114 (1961). Type: Tanzania, N. Prov., Mt. Longido, *Bally* S. 19.

TANZANIA.—N. Prov., Mt. Longido at c. 1,500 m alt. on gneiss, "mat forming cf. *H. aspera*", *Bally* S. 19 (PRE, photos!); *ibid.* comm. *Bayliss*, cult, NBG 234/59 (PRE); Mbulu: Lake Manyara National Park, 3,500 ft. alt., cult. PRE, fl. 4. iv.1956, *Greenway & Kanuri* 11414 (PRE).

***Huernia procumbens* (R. A. Dyer) Leach, comb. nov.**

Duvalia procumbens R. A. Dyer in Flow. Pl. Afr. 31: t. 1218 (1956); Rauh, l.c. (1961); Letty, Wild Flowers Transv. 268, t. 133i (1962).

Type: S. Africa, Transvaal, Pafuri, *Van der Schijff* 3618 (PRE!).

TRANSVAAL.—Soutpansberg: 32 miles north of Punda Maria, *Codd* 5389 (PRE); 8 miles west of Pafuri, cult. Nelspruit, *Leach, H. H. & D. C. Mockford* 12277 (G; PRE; SRGH); Kruger National Park, *Van der Schijff* 3618 (PRE).

RHODESIA.—Nuanetsi: PesuRi ver Gorge, \pm 12 miles west of Pafuri, cult. Nelspruit, *Leach, H. H. & D. C. Mockford* 12286A (K; LISC; PRE; SRGH; ZSS).

There is considerable variation in the inner corona of this species, the lobes of which may be either widely spreading with the inner face somewhat channelled, or strictly erect and more or less triangular in cross-section; the latter being, apparently, the more common.

***Huernia andreaeana* (Rauh) Leach, comb. nov.**

Duvalia andreaeana Rauh, l.c. (1961). Type: Tanzania, between Mombasa and Voi, *Rauh* Ke 867 (HEID, holo.; PRE, photos!).

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