STERCULIACEAE

A New Species of Dombeya and a New Variety of Dombeya rotundifolia

Dombeya autumnalis *Verdoorn*, sp. nov. *D. rotundifolia* (Hochst.) Planch. affinis sed plantis plerumque fruticosis caulibus gracilioribus, cortice leviore, floribus et foliis plerumque in auctumno coaetaneis, ovario breve stellato-pubescente nunquam setosi differt.

Frutex vel arbuscula, 1·6–5 m altus, caulibus pluribus gracilibus ad 5 cm diam., cortice leviore. *Ramuli* graciles, foliati, breve stellato-pubescentes. *Folia* suborbiculata, 1·5–5 cm longa, 1–5 cm lata, utrinque dense vel sparse stellato-pubescentia, subtiliter crenato-dentata, subtus obscure reticulato-nervosa petiolis gracilibus 2–12 cm longis stellato-pubescentibus. *Cymae* in axillis foliorum superiorum, quam folia subtendentia longiores vel breviores, pedunculis gracilibus c 2·5 cm longis stellato-pubescentibus, pedicellis gracilissimis 1–1·5 cm longis stellato-pubescentibus. *Bracteolae* linearinaviculares, c. 2·5 mm longae, utrinque stellato-pubescentes. *Calyx* basi rotundatus obtusus, 0·5 mm connatus, lobis reflexis c. 4 mm longis 2 mm latis, extus stellato-pubescentibus. *Petala* alba, c 7 mm longa, 5 mm lata, persistentia. *Stamina* basi

connata in tubum c 1 mm longum, filamentis ad 2·5 mm longis, antheris c 1 mm longis staminodiis c 5 mm longis. *Ovarium* globosum, c 3 mm diam., breve stellato-tomentosum (non setosum). *Stylus* glabrescens vel minute stellato-pubescens, c 2 mm longus in ramos 3 c 2 mm longos divisus. *Capsula* c 5 mm diam., stellato-tomentosa.

Type: Lydenburg, Penge Mine, *Verdoorn* 2470 (PRE, holo.).

Shrub or small tree 1·5–5 m tall; stems several, slender, up to about 5 cm diam.; bark comparatively smooth, stringy. *Branchlets* slender, leafy, new growth shortly stellate pubescent, the pubescence formed of short spreading hairs from a scaly base. *Stipules* caducous, deltoid or linear-subulate from a deltoid base, densely pubescent. *Leaves* more or less orbicular, on flowering branches 1·5–5 cm long, 1–5 cm broad, densely to sparesely stellate-pubescent on both surfaces, finely crenate-dentate on the margins, reticulate veins rather obscure beneath; petiole slender, 2–12 cm long, stellate-pubescent. *Cymes* in the axils of the upper leaves, often overtopping them, sometimes shorter; peduncles slender about 2·5 cm long, pubescent; pedicels very slender 1–1·5 cm long, pubescent. *Bracts* 7 or 2 at the calyx-base, 1 further down or all 3 scattered on the pedicel, linear-navicular, about 2·5 mm long pubescent on both surfaces. *Calyx* rounded at the base, united for 0·5 mm; lobes reflexed about 4 mm long, 2 mm broad, dorsally stellate-pubescent. *Petals* persistent, white turning cinnamon rufous with age, about 7 mm long, 5 mm broad. *Stamens* united at the base for more or less 1 mm; filaments with the longest about 2·5 mm long; anthers up to 1 mm long; staminodes about 5 mm long. *Ovary* globose about 3 mm diam. shortly stellate-tomentose (not setose); style glabrous or minutely stellate pubescent, about 2 mm long, branches about 2 mm long; ovules 2 in a cell. *Capsule* about 5 mm diam., stellate-tomentose.

Recorded from the eastern Transvaal in mountainous country on mesophytic, well-wooded slopes among rocks and in riverine bush.

TRANSVAAL.—Lydenburg: Abel Erasmus Pass, *Schlieben & Strey* 8387; *Codd* 10027; near Penge Mine, *Codd & Dyer* 7737; *Codd & Verdoorn* 10488; *Repton* 5936 (partly); *Verdoorn* 2470; near Weltevreden Asbestos Mine, *Verdoorn* 2471. Letaba: Dublin Mine, *Miller* 4271.

The only other species in southern Africa, with suborbicular leaves is *D. rotundifolia* which has a wide distribution stretching from Natal and the Transvaal northwards into east tropical Africa and westwards through Bechuanaland to South West Africa. *D. autumnalis* differs from *D. rotundifolia* (as it occurs in the eastern and central areas of southern Africa) in that it flowers in late summer and autumn (with its leaves) while *D. rotundifolia* flowers in spring on more or less leafles branches. From all forms including those in South West Africa, our species differs mainly in that its slender stems do not develope a rough bark. If collector's notes about bark are lacking on a specimen this feature can be determined by the examination of a cut branchlet, because the cortex in *D. autumnalis* appears as a thin, solid outer layer while in *D. rotundifolia* it is a thicker, porous layer which evidently gives rise to the rough bark on the old stems. A further diagnostic feature is that the pubescence on the ovary of *D. rotundifolia*, throughout the length and breadth of its distribution, is setose as well as stellate-tomentose, the bristle-like hairs standing more or less erect, and reaching a length of up to 1 mm while in *D. autumnalis* the ovary is stellate-tomentose and not setose as well. Other small differences can be found such as the distinctly reticulate veining on the under surface of the leaf in *D. rotundifolia* while on our species the reticular veining, if any, is obscure.

Dombeya rotundifolia (*Hochst.*) *Planch.* var. **velutina** *Verdoorn*, var. nov., a typica ovario breve stellato-tomentoso non setoso foliis utrinque velutino-tomentosis differt

Frutex elatus ad 5 m altus caulibus pluribus virgatis, cortice rugosa, ramulis molliter et breve tomentosis *Folia* suborbiculata vel oblongo-orbiculata, 3–9 cm longa, 2·5–9·5 cm lata, utrinque velutino-tomentosa, crenato-dentata, cordata, 5–7

palmato-nervosa, petiolis 1–2 cm longis molliter tomentosis. *Cymae* ramulis lateralibus et terminalibus confertae, pedunculis 10–15 mm longis, pedicellis 7–10 mm longis. *Calyx* c. 6 mm longus, extus dense et breve tomentosus. *Petala* c. 7 mm longa. *Stamina* basi in tubum brevissimum connata, 0·5 mm longum; filamenta c. 2·5 mm longa; staminodia c.5 mm longa. *Ovarium* dense et breve stellato-tomentosum (non setosum). *Stylus* stellato-pubescens.

Type: South West Africa, Rehoboth, Buellsport, Aub Schlucht, *Strey* 2010 (PRE, holo., BOL, NBG).

Tall shrubs with several virgate stems, up to 5 m tall; bark rough, new growth softly and shortly tomentose. *Leaves* suborbicular or broadly oblong-orbicular, broadest in the upper half 3–9 cm long, 2·5–9·5 cm broad, velvetty tomentose on both surfaces (the tomentum made up of minute stellate-pubescent scales, the hairs short and silky), crenate dentate, cordate at the base, palmately 5–7-nerved; petiole 1–2 cm long, softly tomentose. *Cymes* crowded on lateral and terminal branchlets; peduncles 10–15 mm long; pedicels 7–10 mm long. *Calyx* about 6 mm long, densely and shortly tomentose without. *Petals* about 7 mm long. *Stamens* united at the base for about 0·5 mm, filaments unequal lengths, about 2·5 mm long, staminodes about 5 mm long. *Ovary* densely and shortly stellate-tomentose (not setose); style 2–3 mm long, stellate-pubescent.

Occurs along the banks of the permanent stream at Aub Schlucht in the Naukluft Mountains, South West Africa.

S.W.A.—Rehoboth: Naukluft Mountains, farm Buellsport, Aub Schlucht, *Strey* 2010; 2328; *Tölken & Hardy* 666.

In the common and widespread species, *D. rotundifolia*, three features, in the gross morphology, have been found to be constant and of diagnostic value. They are the suborbicular leaves, the rough bark and the pubscence on the ovary which is stellate-tomentose and setose. Microscopically this pubescence consists of stellate and tufted hairs, the tufted being in the upper part of the ovary giving the bristly or setose appearance. *D. rotundifolia* thus characterised occurs widespread in South West Africa although not in the optimum form found so commonly in the eastern and central regions of tropical and subtropical Africa. In South West Africa it generally occurs as a group of low bushy shrubs and only where conditions are favourable does it grow up into the characteristic, rough-barked tree.

In a valley in the Naukluft Mountains, Rehoboth district, along a permanent stream the variety here described, grows. It has the suborbicular leaves and rough bark of typical *D. rotundifolia* but the ovary is constantly shortly stellate tomentose, not setose. Investigation has shown that the habit of these plants also differs from that of typical *D. rotundifolia* as found in the rest of South West Africa. The plants along the stream are all tall, several-stemmed shrubs. These two differences together with a third, the velvetty texture of the pubescence seem to justify at least the varietal rank here given this form of *D. rotundifolia*.

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PLATE 1.—*Widdringtonia cedarbergensis* Marsh (*Luckhoff* in PRE 29824, holotype)
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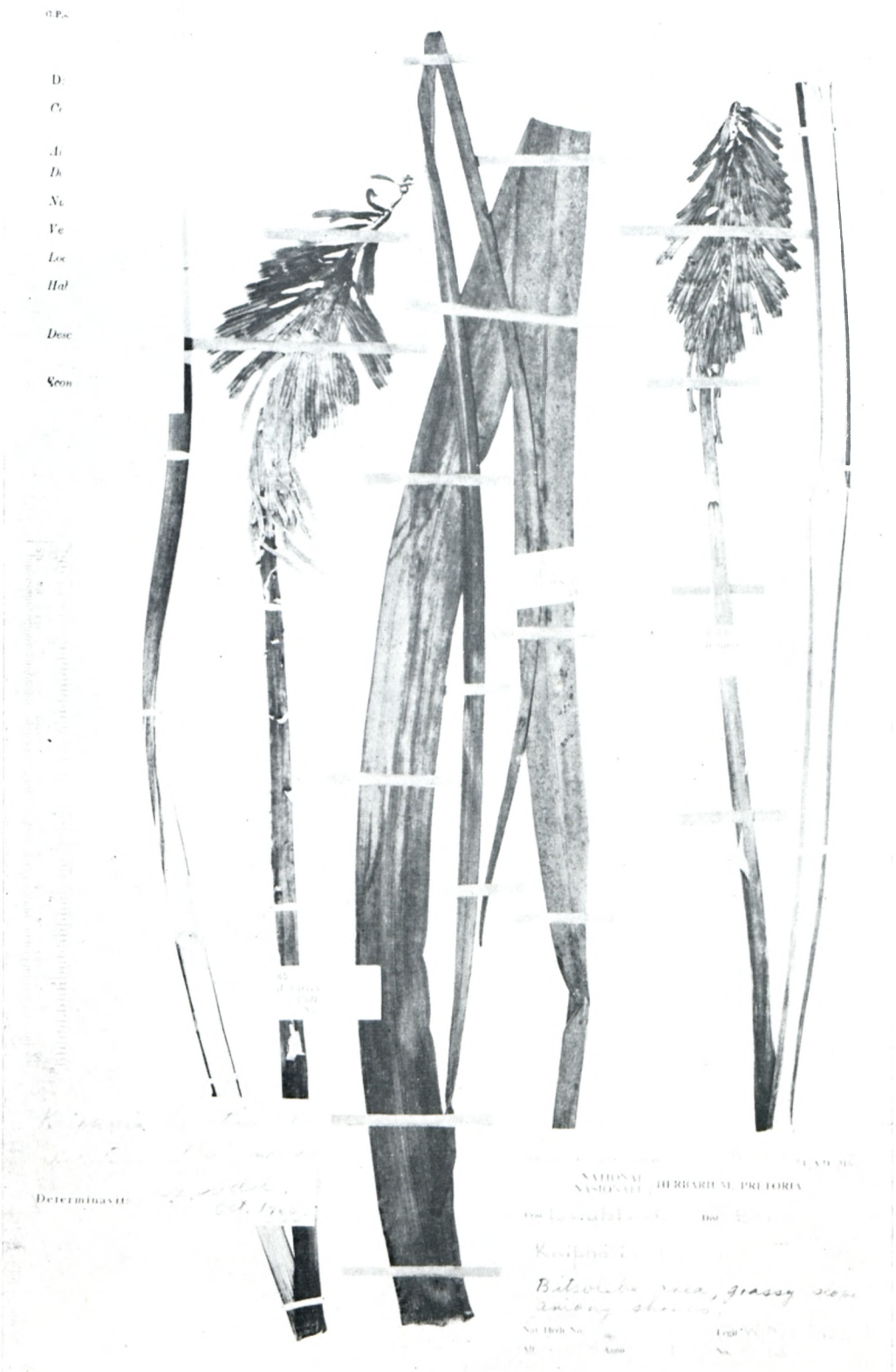

PLATE 2.—*Kniphofia ritualis* Codd (*Marais* 1327, holotype, in PRE)

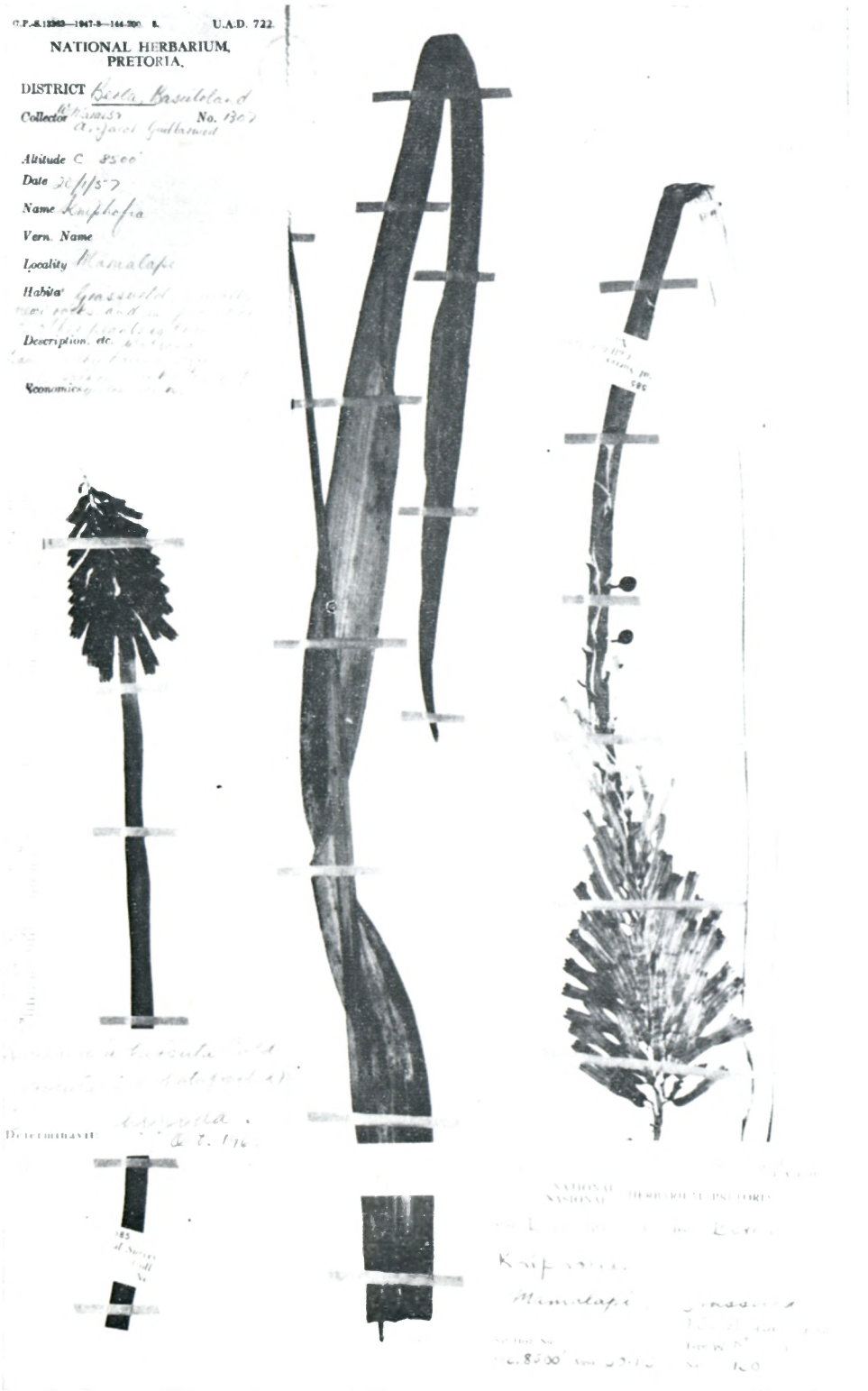

PLATE 3.—*Kniphofia hirsuta* Codd (*Guillarmod & Marais* 1307, holotype, in PRE)

PLATE 4.—*Kniphofia umbrina* Codd (*Bruce* 272, holotype, in PRE)

PLATE 5.—*Kniphofia acraea* Codd (*Liebenberg* 7120, holotype, in PRE)