

# AN UNDESCRIBED GEOCARPIC PLANT FROM SOUTH AFRICA.

By SYDNEY M. STENT.

## ***Cucumis humo-fructus* Stent sp. nov.**

Plants monoecious. Flowers small, the male and female together in contracted racemes. ♂ flowers: pedicel slender, 4–20 mm. long, hairy, articulate below the calyx tube; calyx tube up to 5 mm. long, hairy with rather flaccid acute unicellular hairs, 1–2 mm. long, 10-nerved; lobes 5, about half as long as the tube, linear subulate, obtuse, with a few scattered long hairs; corolla-tube equalling and confluent with the calyx-tube, without scales inside; lobes 5, cut down nearly to the calyx-tube 2–4 mm. long, ovate, obtuse, papillose with short gland-tipped hairs, more densely so on the back and with some long acute hairs on the nerves; mid-nerve excurrent into a short blunt gland-like mucro. Stamens 5, inserted on and completely included in the tube, 4 connate in two pairs, 1 free; filaments very short; anthers 1-theous sparingly and shortly ciliate; thecae conduplicate; connectives produced into lanceolate sub-acute appendages, those of the connate anthers free or more or less cohering; rudimentary ovary a cushion-like gland. ♀ flowers: pedicel very short and stout, lengthening and enlarging and arching downwards, finally forcing the acute ovary deeply into the ground; calyx and corolla as in the male; ovary inferior, narrow ovoid, contracted into a neck about as long as the calyx-tube, densely hispid with appressed retrose hairs, 3-chambered; ovules many, horizontal; style short; stigma 3-lobed, with the lobes lanceolate obtuse; disc annular; staminodes 3. Fruit a whitish berry, globose to ovoid globose, about the size of an orange; seeds numerous, white, oval, smooth, compressed, emarginate, about 18 mm. long, embedded in white jelly-like pulp. Stems prostrate and trailing, often rooting from the nodes, hairy-angular. Leaves entire, broadly ovate to sub-rotundate, obtuse to sub-acute and apiculate, obtusely angled, minutely ciliate and gland-toothed, scabrid with sharp tubercle based hairs, cordate at the base, 6–12·5 cm. broad and about as long; petiole rough hairy, up to 5 cm. long. Tendrils simple.

Farm Roo-depoort, Naboomspruit, Waterberg, Transvaal: *Galpin* M. 146.

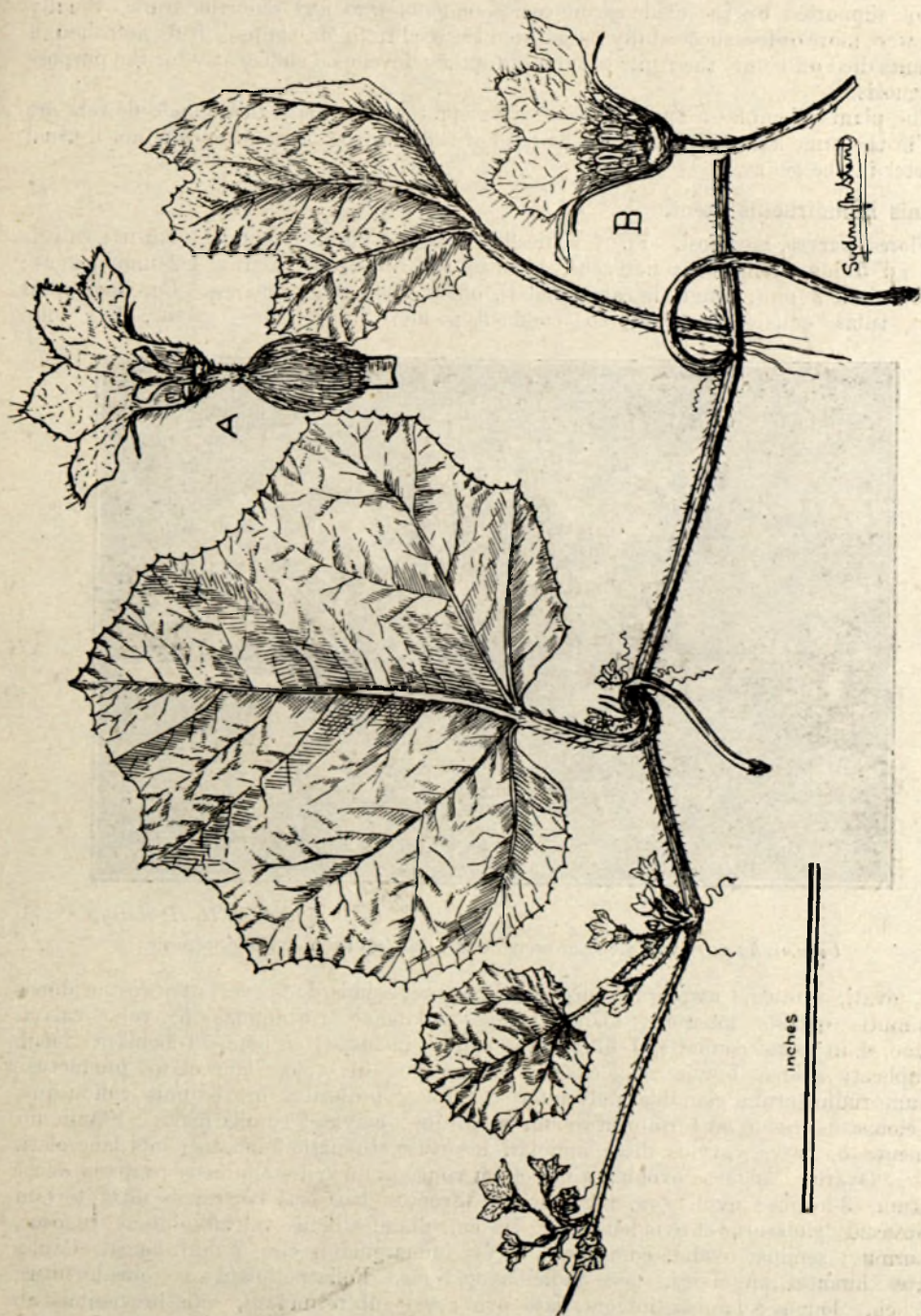
Grown at Botanical Laboratories, Pretoria (*Nat. Herb.* 2866).

This interesting plant was grown from seed taken from a fruit sent to the National Herbarium by Mr. E. E. Galpin (*Galpin* M. 719), of Naboomspruit, Waterberg, Transvaal. In his letter Mr. Galpin says: "I send you a curious gourd which is produced underground and resembles a tuber; it was brought to me by natives working in my lands . . . the natives describe it as bearing trailing stems about 3 ft. long, rooting at the nodes like a sweet potato, and bearing potatoes which have seed inside them like a pumpkin. They state the fruit is not edible but is used as medicine."

Fruit of this plant was first sent to the Herbarium in 1910 by the late Mr. Eddie Meintjes, who found it lying on a ploughed field at Potgietersrust, and in 1914 by Mr. W. Meyer, of Cullinan. (The photographs of the fruit and seed were taken from Mr. Meyer's specimen.) Attempts to germinate the seed failed. Later I visited a farm near Naboomspruit and questioned the natives about this gourd; they most of them knew it, but could not describe the plant. Some years later a fruit was again sent to the Herbarium and the seeds were sown; this time they germinated, but the young plants died off without flowering.

In 1923, Mr. Snyman, of Grootfontein, South-West Africa, found the plant growing in sand in South-West Africa, and submitted fruits to the Division of Botany for identification; these were sent to Kew, but were quite unknown to the authorities of that institution, who suggested that the fruit had not developed underground, but had been





*Cucumis humifructus* Stent.

A.—Pistillate flower (much magnified).  
B.—Staminate flower (much magnified).



buried by natives for the purpose of preserving it for future use. This theory, however, was not supported by the evidence of correspondents who had sent the fruit. Finally plants were more or less successfully raised from the seed from Mr. Galpin's fruit, and though the plants died off before the fruits could mature they developed sufficiently for the purpose of diagnosis.

The plant resembles a typical *Cucumis* except that the male and female flowers are borne in the same axil, the female at the base of the short contracted raceme, not a usual character in the genus.

***Cucumis humo-fructus* Stent.**

Flores parves, racemosi. Fl. ♂ pedicellus gracile 4–20 mm. longus, hirsutus; calycis tubus ad 5 mm. longus, 10-nervatus, hirsutus, pilis flaccidis, acutis, 1·2 mm. longus; lobi 5, circ. 2 mm. longi, lineare-subulati, obtusi, pilis longis sparsis. Corollae tubus calycis tubis equans et cum eo confluent; lobi 5 ad tubis partiti, 2–4 mm.



[Photo by H. H. Storey.]

*Cucumis humo-fructus*, Stent, growing on Mr. Galpin's farm at Naboomspruit.

longi, ovati, obtusi, utrimque pilis glandulis brevissimis dense vestatis, costae dorsis in minutis obtusis mucronis glanduliformis productae. Stamina 5, tubo calycis insertae, 4 in paris connatis, 1 libra, tubo calycis inclusae; antherae 1-loculare; loculi conduplicati sparse breviterque ciliati; connectivus in apice lanceolato productus; ovarium rudimentum glandula pulveniforme. Fl. ♀ pedicellus brevissimus validusque, mox elongatus, rigide ad terram in arcum curvatum; calyx et corolla maris. Staminum rudimenta 3, parva; stylus disco annulari insertus, stigmatibus 3-lobatis; lobi lanceolati, obtusi. Ovarium anguste ovoideum in collum contractum, pilis appressis retrorsis dense hirsutum, 3-loculis; ovulis ∞, horizontalis. Fructus baccatus corticatus intra terram maturescens, globosus vel ovoideus, circ. 7·5 cm. diam. albidus vel albo-luteus, rugosus, ∞-spermus; semina, ovalia, compressa, laeva, immarginata, circ. 2 mm. longa. Caules reptantes, hirsutes, angulares, saepe radicibus nodibus. Folia petiolata; petiolus hirsutus, ad 5 cm. longus; lamina integra, late ovata vel sub-rotundata, setis brevissimis ab tuberculis ortis scabrida; margines minute ciliatae, glandulo-dentatae et obtuse angulatae; basis cordata, apex obtusus vel sub-acutus, breviter apiculatus. Cirrhi simplices.



Seeds of *Cucumis humifructus*.



Fruit of *Cucumis humifructus*.

[Photo by I. B. Pole-Evans.]