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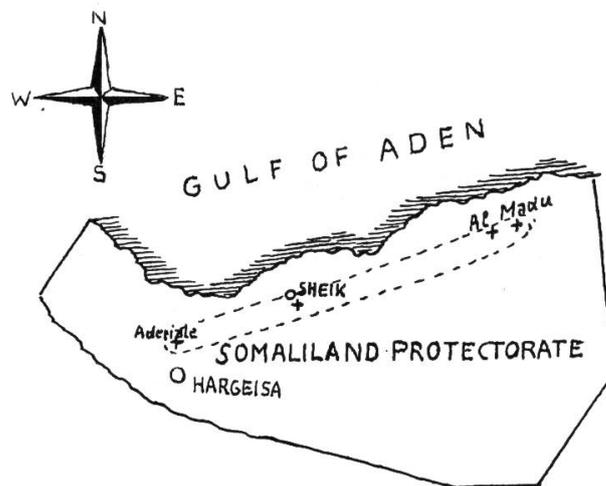
**Lithocaulon Bally (Asclepiadaceae),
a new genus from Somaliland**

by

Peter R. O. BALLY

(Botanist, Coryndon Memorial Museum, Nairobi, Kenya Colony)

The drier regions of Tropical East Africa are comparatively rich in succulents; in Somaliland Protectorate with its long arid coastline facing the Gulf of Aden, with its interior rising steeply in a sequence of rocky hills, terraces and plateaus to summits of over 7000 feet, succulents are particularly numerous, especially *Euphorbieae* and *Stapeliaceae*, many of them endemic.



On a botanical expedition in the eastern part of Somaliland Protectorate in 1956, the writer, discovered a *Stapeliad* so fundamentally distinct from all other known genera of that tribe that he feels justified in describing it as a

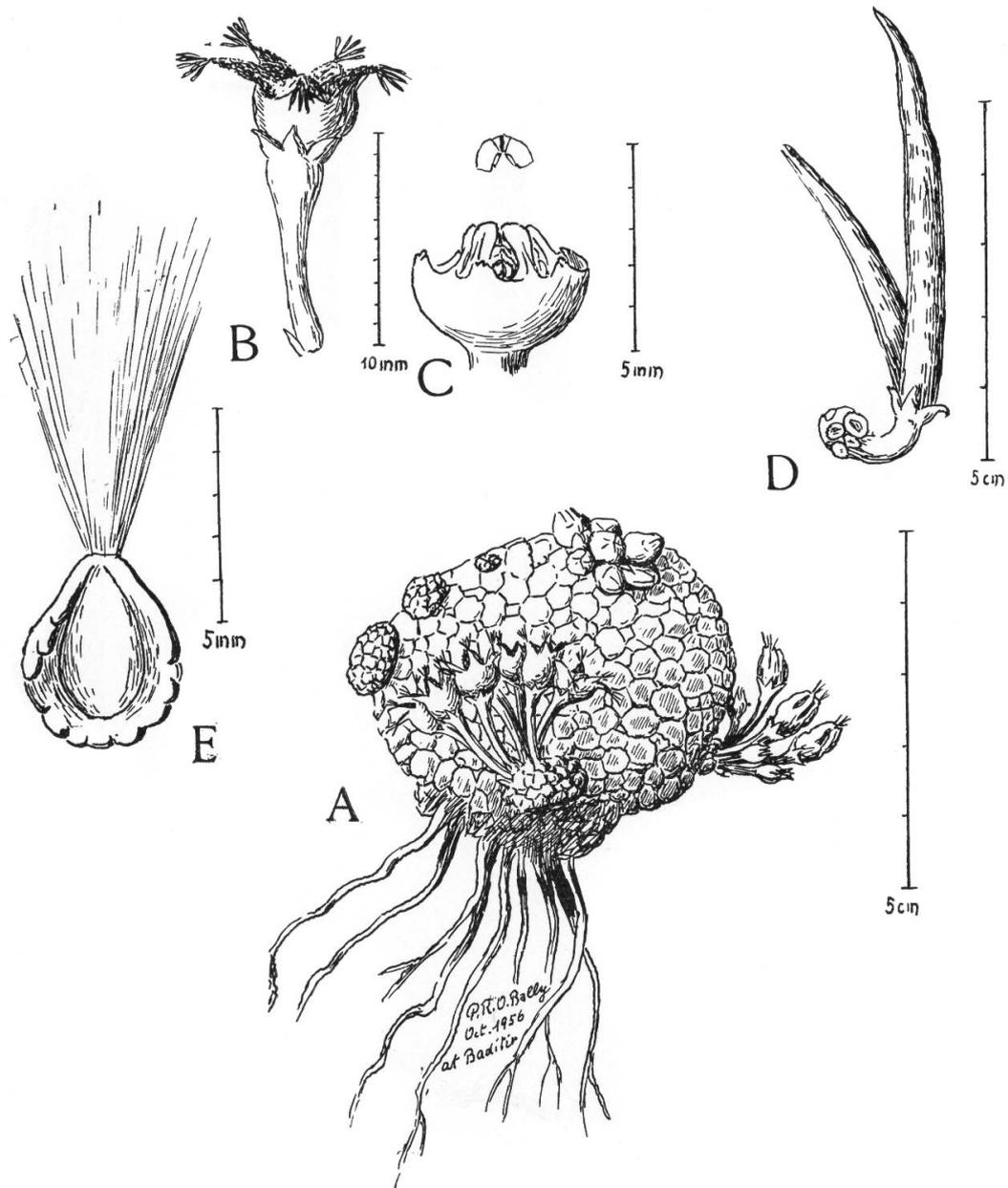


FIG. 4. — *Lithocaulon sphaericum* Bally, spec. nov.; A: Plant. B: Flower. C: Corona. D: Follicle. E: Seed.

new genus. By good fortune, one of the twenty-odd plants seen was in full bloom, while two plants were found with fully developed follicles; it was thus possible to prepare a complete description of this interesting plant.

About six months later a second species was found in Western Somaliland by Mr. J. L. Daniels, Assistant Geologist in the Geological Department, who

sent the living plant to the writer, then in Nairobi. It never flowered while in cultivation¹.

On a subsequent trip in 1957 the writer, accompanied by Mr. Daniels, revisited the very restricted habitat of the second plant, some 25 miles north-west of Hargeisa. Again, no flowering specimens were found, but 18 living plants were collected which were later sent to several botanical gardens.

It was in the Jardin Botanique "Les Cèdres" that a plant grafted on *Ceropegia woodii* flowered in July 1958, and from this the description of the second species could at last be made. The writer avails himself of this opportunity to thank M. Julien Marnier-Lapostolle, the owner of "Les Cèdres", for the loan of the grafted plant.

Lithocaulon Bally (Asclepiadaceae), gen. nov.

A genere *Caralluma* habitu haud ramoso, percompacto, superficie irregulariter tessellata, pedunculis subglobosis, tessellatis distinguitur.

Plantae pumilae, ad 7 cm. altae, caulibus subsphaericis aut cubiformibus; inflorescentiae umbellatae.

SOMALILAND: Betw. long. 43° 53' and 48° 53' E., and lat. 9° 51' and 10° 55', at altitudes of 1000 to 1350 m.

TYPE SPECIES: *Lithocaulon sphaericum* Bally.

Lithocaulon sphaericum Bally, spec. nov.

Planta percrassa, haud ramosa, haud foliosa. *Caulis* erectus, simplex, subsphaericus, ad 62 mm. altus, 65 mm. diam., ad apicem leviter depressus, superficies ravo-viridis aut pallide viridis irregulariter tessellata. Tessellae parvae, 2-8 mm. diam., obtuse polygoniae, irregulariter dispositae, sed 4 seriebus 90° distantibus tessellarum majorum interruptae. Illae tessellae majores saepe in transverso ellipticae, aliquando margine superiore crenatae; ex illis inflorescentiae productae. *Pedunculi* subsphaerici, minute tessellati, decidui, ad 10 mm. longi, ad 7,5 mm. diam., usque 4 fascicula multiflora (ut videtur 8-10-flora) deinceps gerentes. Bractee lineares, ad 1 mm. longae. *Pedicelli* 4-10 mm. longi, carnosii, teretes, glabri, in apice incrassati, 1,5-2 mm. diam. *Calycis* lobi anguste deltoidei, carnosii, acuti, glabri, 2 mm. longi, 1,5 mm. ad basin lati. *Corollae* tubus 4 mm. longus, 5 mm. diam., campanulatus, glaber, intus et extra pallide viridis; lobi patuli, deltoidei, 3 mm. longi, 2,75 mm. lati, extra pallide virides, glabri, intus atropurpurei, papilloso, in margine reflexi, pilis minutis rigidis ciliati, in apice obtusi, fasciculis 8-10 pilorum loriformium, 2,75 mm. longis coronati. *Corona* duplex, glabra, atropurpurea, 4 mm. alta, 4,5 mm. diam.; exterior late cupuliformis, margine erecta, 5-lobata, lobis 0,5 mm. altis, minutissime 3-dentatis; lobi interiores

¹ In *Malpighia* 34: 541. 1937, E. CHIOVENDA describes as *White-Sloanea migurtina* a plant which may well be identical with Mr. Daniel's specimen which it resembles closely with its squat, quadrangular, blunt-edged, tessellated stem.

CHIOVENDA's description was made from a sterile plant found in Somalia, Nogal valley, at Gid Gudub, by *Puccioni & Stefanini* on 20.4, 1934; its outward similarity suggested to him a relationship with *White-Sloanea crassa* Chiov. from which it differs, however, fundamentally by its floral structure and by the tessellated stem.

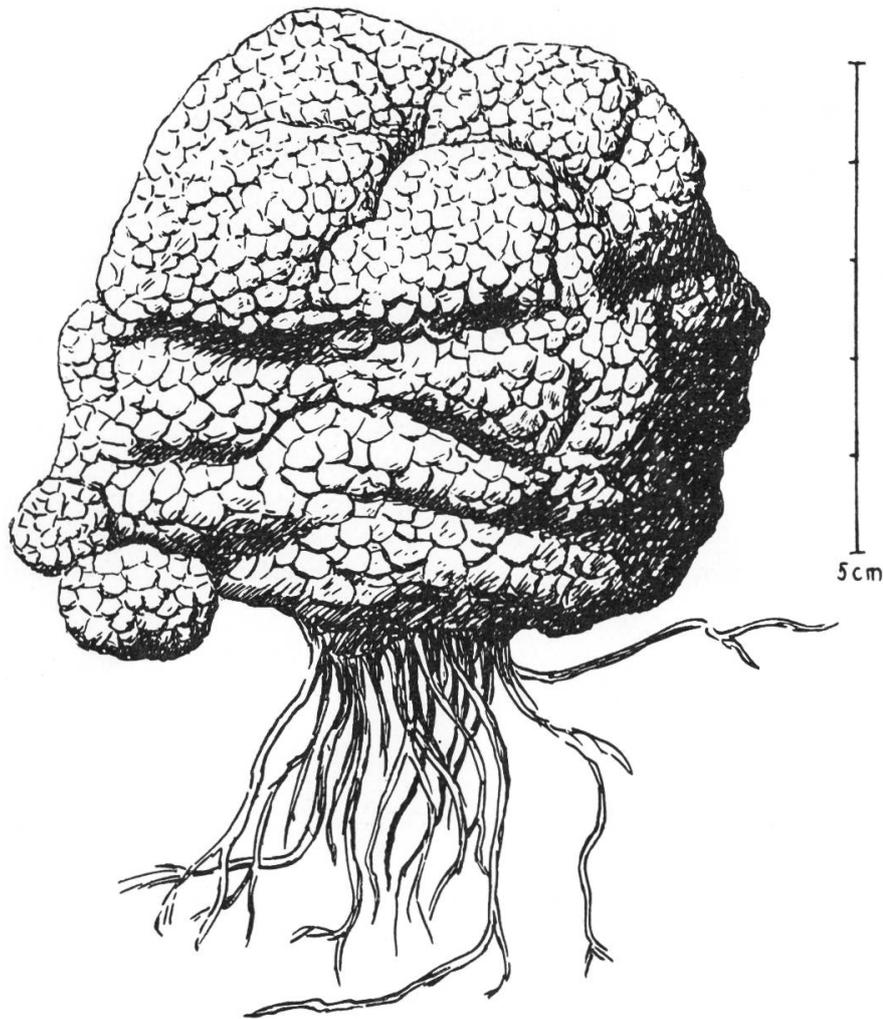


FIG. 5. — *Lithocaulon cubiforme* Bally, spec. nov.

5, supra stamina incumbentes, ad apicem recurvati, spatulati, 1,5 mm. longi, in apice 0,5 mm. lati, atropurpurei. *Folliculi* glabri, teretes, pallide virides, leviter divergentes, in apice acuminati, 35-55 mm. longi. Semen ellipticum aut obovatum, cochleatum, in margine durum, corneum, crenatum.

An unbranched, leafless, succulent plant. Stem erect, simple, subspherical, to 61 mm. high, to 65 mm. diam., slightly depressed at the apex. The entire surface tessellate, pale green to grayish green. Tessellations small, 2-8 mm. diam., obtusely polygonous, irregularly disposed, the pattern being broken by 4 vertical ranks of larger shields along four equidistant meridians, often transversely elliptic, their upper margin sometimes crenate; from these the inflorescences are produced. Peduncles subspherical, minutely tessellate, deciduous, to 10 mm. long and 7,5 mm. diam., producing up to 4 many-flowered (8-10 flowers seen) umbels consecutively.

Pedicels 4-10 mm. long, fleshy, glabrous, terete, thickened at the apex, 1,5-2 mm. diam., with a minute linear bract at the base, 1 mm. long.

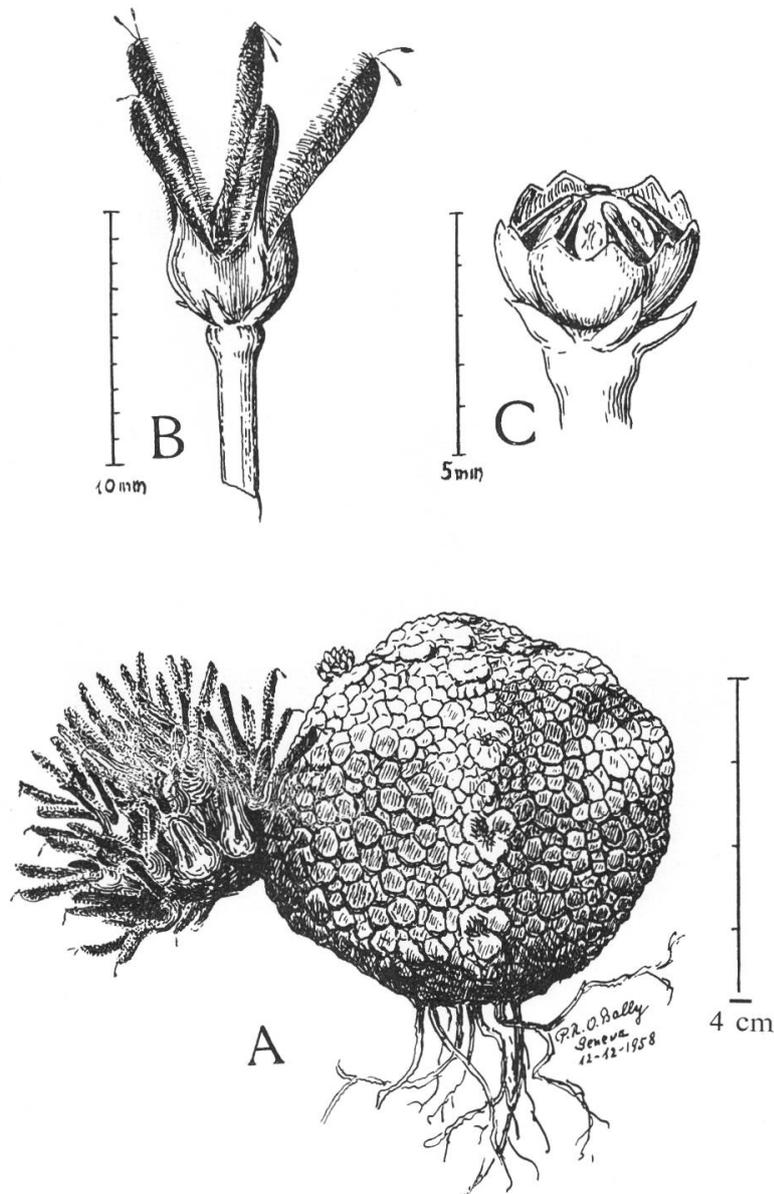


FIG. 6. — *Lithocaulon cubiforme* Bally, spec. nov.; A: Flowering plant. B: Flower. C: Corona.

Sepals narrowly deltoid, acute, fleshy, glabrous, 2 mm. long, 1,5 mm. wide at the base. Corolla: tube 4 mm. long, 5 mm. diam., cup-shaped, glabrous, inside and outside pale green; lobes spreading, deltoid, 3 mm. long 2,75 mm. wide at the base, outside glabrous, pale green, on the inner or upper surface pappillate, purplish maroon, margins reflexed, beset with minute, stiff ciliate hairs; at the apex a fascicle of strap-shaped, vibratile hairs to 2,75 mm. long. Corona: glabrous, blackish purple, 4 mm. high, 4,5 mm. diam.; outer corona broadly cup-shaped, margin rim-like, erect, lobes 5, deltoid, minutely 3-dentate at the apex; inner lobes incumbent over the staminal column, with ascending,

spatulate tips, 1,5 mm. long, 1 mm. wide at the apex. Follicles glabrous, terete, pale green, paired, divergent, apex acuminate, 35-55 mm. long, 4-5 mm. diam. Seeds elliptic or obovate, cochleate, black, 4,75 mm. long, 4,5 mm. wide, with a hard, horny, crenate margin, airborne with a tuft of silky hairs, 8-9 mm. long.

SOMALILAND PROTECTORATE: Al Madu Range (Ahl Mountains) on the southern slopes, Baditir, 10°52' N., 48°58' E., 1000-1300 m. alt. (type locality) *Bally B 10924* (K; type) Oct. 6. 1956; Ureh, Oct. 10. 1956, *Bally* s.n.

Lithocaulon cubiforme Bally, spec. nov.

A *Lithocaulo sphaerico* Bally caule obtuse quadrangulato, ad apicem costato, inflorescentia multiflora, corollae lobis longioribus, coronae exterioris lobis bifidibus distinguitur.

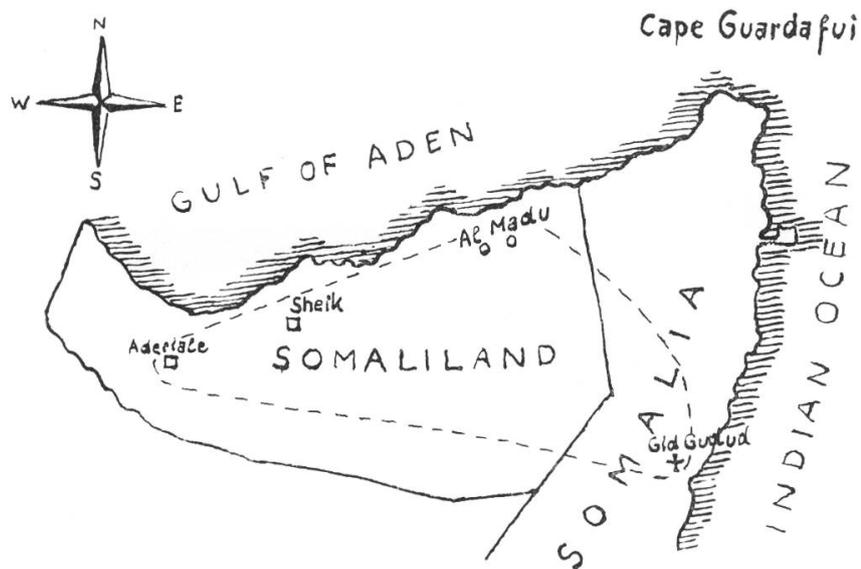
A very fleshy, unbranched, leafless, glabrous plant, obscurely cube-shaped. Stem solitary, erect, 3 to 5 cm. high, 4 to 6 cm. diam., obtusely quadrangular, truncate at the apex. Surface pale green, covered with irregular, flat, obtusely 3-6-angled tessellations 2-3 mm. diam., and with larger, more or less cordate tessellations 4-6 mm. diam. disposed along the angles, converging at the apex, sometimes forming a prominent ridge.

Flowering eyes immediately above the cordate tessellations. Peduncle hemispherical, tessellate, 5-15 mm. diam., deciduous, though more persistent than the inflorescence. Inflorescence umbellate, to 43 mm. diam., developing 30 flowers simultaneously. One to three umbels are produced consecutively, rarely simultaneously, in various parts of the angles. Pedicels 6-12 mm. long, cylindrical, glabrous, green, with a minute, lanceolate bracteole $\frac{3}{4}$ mm. long at the base. Sepals 2 mm. long, narrowly triangular, acute. Corolla: tube spherically inflated, 3 mm. high, 5 mm. diam., glabrous on both sides, pale green outside, buff inside. Lobes linear-lanceolate, acute, 9 mm. long, with revolute margins, erect-spreading, grey-green, glabrous outside, pale rose fading to green towards the tip and densely beset with stiff, pink hairs on the inner or upper surface, crowned at the apex with 2-4 clavate, vibratile hairs 1 mm. long. Corona cupular, glabrous, dark reddish purple, 4 mm. diam., 2,3 mm. high, outer corona rim-like with 5 bifid, broadly triangular lobes, $\frac{3}{4}$ mm. high. Inner corona horns strap-shaped, 1 mm. long, straight, incumbent over the staminal column, slightly exceeding the outer corona horns.

SOMALILAND PROTECTORATE: 26 miles N. of Hargeisa, Aderiale Hill, on syenite, with scant xerophytic vegetation including *Echidnopsis dammanniana*, *Aloe rigens*, *A. somaliensis*. alt. 1300 m. 9°21' N., 43°56' E., *J. L. Daniels* s.n. April 1957; Oct. 2. 1957, *Bally & Daniels B 11785* (type, inflorescence only, K); near Sheik, Roy Tribe (no herb. number, living plants only) spring 1958.

The Somali name for both species which are edible is "dinah" (tortoise) on account of its rounded shape and tessellate surface.

Since this article went to press, the writer had an opportunity to establish fairly accurately the locality and the geographical bearings of STEFANINI and PUCCIONI's *Lithocaulon* sp. (syn. *White-Sloanea migurtina*); it is situated at the mouth of the Nogal River in Somalia, near the shores of the Indian Ocean at appr. $49^{\circ}50'$ E., $8^{\circ}05'$ N. The known area of distribution of *Lithocaulon* is thus considerably wider than presented on the map on pag. 53; it extends across the whole width of the Horn of Africa as shown on the map given below.



Distribution of Lithocaulon

- *L. cubiforme*
- *L. sphaericum*
- + *L. sp.* (syn. *White-Sloanea migurtina*)

ERRATA

Page 55, footnote, al. 5:

for Gid Gudub read *Gid Gudud*
 for 20.4.1934 read 20.6.1924

