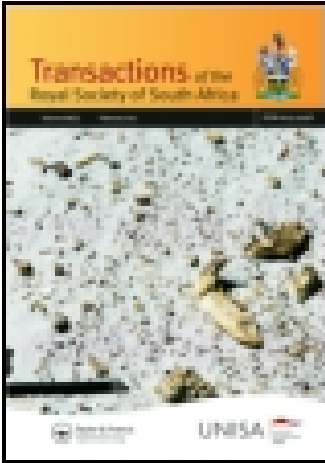


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## Transactions of the Royal Society of South Africa

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/ttrs20>

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Published online: 08 Apr 2010.

To cite this article: Paul A. van der Bijl (1921) THE GENUS TULOSTOMA IN SOUTH AFRICA, Transactions of the Royal Society of South Africa, 9:2, 185-186, DOI: [10.1080/00359192109520207](https://doi.org/10.1080/00359192109520207)

To link to this article: <http://dx.doi.org/10.1080/00359192109520207>

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## THE GENUS TULOSTOMA\* IN SOUTH AFRICA.

BY PAUL A. VAN DER BIJL.

(With Plate IX).

The genus *Tulostoma* belongs to the family *Lycoperdaceae*, a family familiar to most through the "puff-balls" included in it. It is a widely-distributed genus, and in South Africa two species are thus far known, viz. *Tulostoma cyclophorum*, Lloyd, and *Tulostoma Lesliei*, n. sp., herein described. Masee† records *Tulostoma mammosum* (Mich.), Pers., from South Africa, but this species appears to belong typically to Europe and England, and has not been collected in Africa during recent years.

The genus is with others included in the tribe *Tulostomeae*,‡ which embraces those *Lycoperdaceae* which have peridia borne on a distinct stalk *not confluent with the peridia* (distinguish some *Sclerodermeae* and some *Lycoperdeae*) and *not prolonged as an axis into the peridia* (distinguish *Podaxineae*). From other genera of this tribe the genus *Tulostoma* is recognised by the following two characters: (1) *the stalk is inserted into a depression at the base of the peridium*; (2) *the peridium opens by a mouth, or in a few species several mouths are present*.

Mr. C. G. Lloyd,§ in monographing the genus *Tulostoma*, bases his main divisions on the nature of the mouths by which the peridia open. On this basis he establishes the following five main divisions:

- "(1) Mouths definite, tubular, round, naked, more or less protruding.
- "(2) Mouths definite, naked, elongated, sometimes several on the same peridium.
- "(3) Mouths an indefinite torn aperture, not surrounded by a fibrillose layer.
- "(4) Mouths surrounded with a fibrillose layer.
- "(5) Mouths fimbriate."

*Tulostoma cyclophorum*, which he records from South Africa (Western Cape Province probably), is placed in the fifth division above. *Tulostoma*

\* The name of the genus is also spelled *Tylostoma*, and the following appears to be the history of the name:

*Tulostoma*, Pers., 'Disp.', p. 6; Fries, 'Syst. Orb. Veg.', i, p. 139.

*Tylostoma*, Sacc., 'Syll. Fung.', vii, p. 60; Lloyd (*vide* below).

† Masee, G., "British Gasteromycetes," 'Ann. Bot.', iv, p. 86 (1889).

‡ Lloyd, C. G., "The Genera of Gastromycetes" (Cincinnati, Ohio, U.S.A., 1902.)

§ Lloyd, C. G., "The Tylostomeae" (Cincinnati, Ohio, U.S.A., 1906).

*Lesliei* belongs to the first division, and we characterise it by the following description :

TULOSTOMA LESLIEI, n. sp. (Fig. 1.)

Plants terrestrial, stalked ; peridium globose, *white*, 7-9 mm. diam. ; exoperidium adhering at base of peridium ; *mouths definite, tubular, round, protruding* ; capillitium branched, hyaline, septate, nodulose at septa ; spores in mass cinnamon colour, globose, *smooth*, 3·5-4  $\mu$  diam. ; stalk 1·5-2·5 cm. long  $\times$  1-1·5 mm. diam., inserted into a depression at base of peridium, longitudinally striate, hollow with a central fibril.

*Habit.*—Found growing in sandy soil at Durban by the writer. (Type in Natal Herbarium, P. v. d. B., No. 690.)

