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PHLYCTIDOCARPA – A NEW MONOTYPIC GENUS OF THE UMBELLIFERAE FROM S. W. AFRICA

by

**J. F. M. CANNON, British Museum (Natural History), and
W. L. THEOBALD, Gray Herbarium, Harvard University**

Some years ago a specimen of a very unusual umbelliferous plant was brought to the attention of one of us (J. F. M. C.) by Mr. W. Marais, then of the South African National Herbarium, Pretoria. The specimen was in an advanced stage of fruiting, and while this provided excellent evidence regarding the fruit structure - a character of paramount importance in this family, the foliage was in a dried-up and shrivelled state that made analysis very difficult. For this reason a description of this material was delayed in the hope that further specimens would be brought to our notice. Last year, through the courtesy of Prof. H. Merxmüller, we received a further specimen that proved to be of the same species. This individual was in young fruit with the vegetative parts in a first class condition. Morphological study against the background of the african representatives of the family has shown this to be a new taxon, while the very unusual features of the fruit wall have left us with no alternative other than to describe the specimens as a monotypic new genus.

Phlyctidocarpa flava Cannon & Theobald, genus et species nova

Herba annua erecta glabra, 50 - 60 cm alta. Caulis usque ad inflorescentiam simplex. Folia alterna, ternato-pinnatisecta, usque ad 8 cm longa; lobi lineari-lanceolati remoti, dentibus paucis. Umbella terminalis pedunculo brevi tantum 1 - 3 cm longo portata, umbellis lateralibus plerumque brevior. Umbellae 4 - 5 radiatae, radiis 1.5 - 2.5 cm longis. Bractee 3 - 4, lineari-lan-

ceolati, inaequales, 9 - 12 mm longae. Umbellulae (umbellae partiales) umbellae terminalis 5-florus; pedicelli capillares 5 - 10 mm longi. Bracteolae 2, lineari-lanceolatae, 2 - 4 mm longae. Flores umbellae terminalis hermaphroditi sed aliquot flores umbellarum lateralium solum masculi. Petala flava. Stamina 5. Discus prominens. Styli breves divergentes. Stylopodium obsoletum. Fructus oblongus, cr. 3 mm longus, 2 mm latus, vesiculis clavatis seriatim dispositis obtectus; cellulae epidermidis papillosae; pericarpium parenchymatum; crystalla per pericarpium omnio dispersa et basi vesicularum aggregata, in commissura abunda; vittae magnae, in intervallis solitariae, in commissura duae; vittae grandes fasciculis vascularibus oppositae. Semen in sectione transversali subteres; superficies commissurae plana.

Holotypus: Farm Eldorado, Outjo District, South West Africa, 28.3.1963. GIESS, VOLK & BLEISSNER 6075 (M) "Einjaehriges Kraut bis 1 m hoch. Blüten klein, gelb. Schwarzer Boden zwischen Oberflaechenkalk, Mopanezwergbuschbestand. Verhaeltnismaessig haeufig in und um Buesche."

Paratypus: Orupembe waterhole, Kaokoveld, South West Africa, 5.5.1957. de WINTER & LEISTNER 5739 (PRE) "Erect annual with yellow flowers. Hillside with loose round boulders and reddish loamy soil."

The generic name derives from the Greek word *φλυκτίς* - blister, a reference to the vesicles which cover the fruit, while the specific epithet refers to the colour of the petals.

The specimen from München has been selected as the holotype because, although its fruits are not completely mature, its general condition is better than the Pretoria specimen and conveys the most complete impression of the species as a whole.

From the fruit characters, the equality of the primary ridges and the seed which is semi-circular in transverse section, with a flat commissural face, we place this plant in the Apioideae Ammineae - Carineae. The large intrajugal vittae accompanied by smaller vallecular ones, together with the presence of well developed crystal druses in the pericarp suggests the Heteroclitae

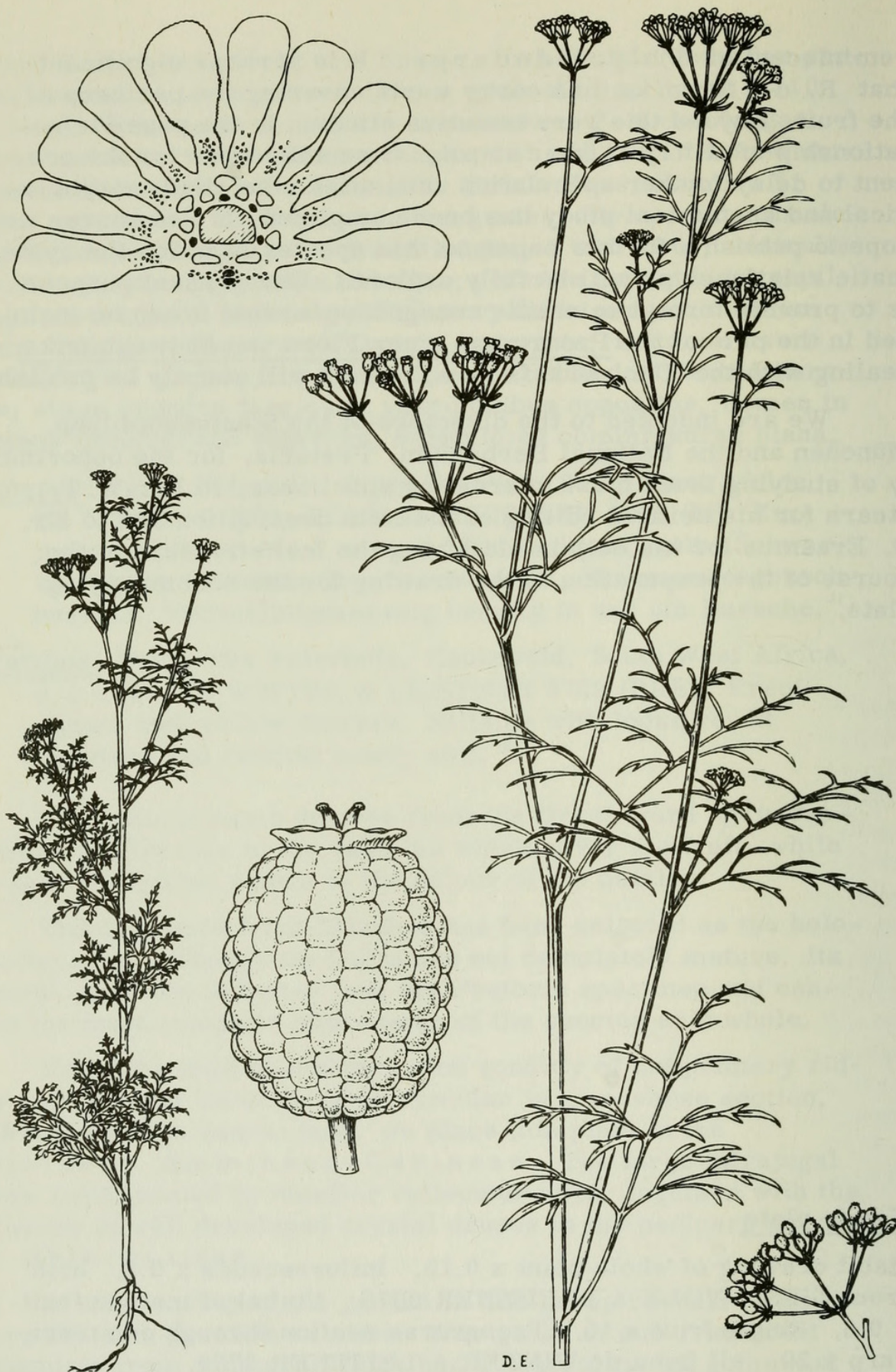
A brief survey of the genera in this group reveals *Rhyticarpus* as a possible relative. This genus of sub-frutescent perennials from southern Africa has a general facies somewhat

reminiscent of *Phlyctidocarpa*. It is perhaps significant that *R. difformis* has corky warts covering the pericarp of the fruit. Beyond this very tentative allusion to the possible relationship of *Phlyctidocarpa*, it seems better for the present to delay further speculation until after a detailed morphological and anatomical study has been completed. In due course we hope to publish a further paper on this species in which the systematic relationships will be fully explored. Our present purpose is to provide formal scientific recognition so that it can be included in the part of the Prodromus einer Flora von Südwestafrika dealing with the *Umbelliferae*, which will shortly be published.

We are indebted to the directors of the Staatssammlung, München and the National Herbarium, Pretoria, for the opportunity of studying these most interesting specimens, to Dr. W. T. Stearn for his critical editing of the latin description and to Mr. D. Erasmus for his help in clarifying the leaf structure in the course of the preparation of the drawing for the accompanying plate.

Key to plate

Habit drawing of whole plant x 0.15, Inflorescence x 0.6, both from GIESS, VOLK & BLEISSNER 6075. Umbel of mature fruit x 0.6, Single fruit x 10, Transverse section through one mericarp x 20, all from de WINTER & LEISTNER 5739.





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