

A NEW SPECIES OF *PACHYSTIGMA* HOCHST. FROM TRANSVAAL.

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THE genus *Pachystigma* has its centre of dispersion in South Africa. Of the ten known species, only two are to be found in Southern Rhodesia: *P. rhodesianum* (S. Moore) Robyns, which is limited to that country and the very poisonous *P. pygmaeum* (Schlecht) Robyns, a native of South Africa but extending into Southern Rhodesia.

Several species show that suffrutescent habit which is so commonly met with in South Africa,* but others are dwarf shrublets or erect and more or less branched shrubs of 2-4 m. high, as *P. Bowkeri* Robyns and *P. macrocalyx* Robyns. The second species is perhaps the most variable of the whole group in its vegetative characters as a result of response to local conditions. Amongst rocks, it shows the dwarf squat habit with short internodes and small subtomentose more or less fulvous leaves (forma rupicola), whereas on the edge of forests, it develops into a much branched shrub with elongated internodes and large puberulous green leaves (forma silvicola). The extreme forms of this species look so different that one may easily be inclined to consider them as two distinct species, but the differences seem to be only of degree, no qualitative characters being available.

The new species from Northern Transvaal described here through the courtesy of Dr. E. P. Phillips, Principal Botanist, Pretoria, who kindly sent the herbarium specimens for examination to Brussels, is, according to the collector's label, a small tree of about 5 m. (15 feet) high. Its affinities are with *P. macrocalyx* on account of the habit and the long calyx lobes. It may be incorporated in the key I have published in 1928† as follows:—

Folia utrinque tomentosa vel rarius dense appresse pilosa; alabastra ut calycis lobi pubescentia:

Folia anguste elliptica, tantum usque ad 1 cm. lata; cymae distincte pedunculatae, pedunculo 3-5 mm. attingente:

Frutices nani; folia 3 cm. longa et 1 cm. lata, cyanescentia pilosaque; cymae 3-5-florae; calycis lobi lineares, vix tertiam partem superiorem alabastrorum attingentes..... *coeruleum*

Arbores parvi, breviter ramosi; folia usque ad 1.7 cm. longa et 0.8 cm. lata, cinereo-tomentella; cymae 3-florae; calycis lobi anguste elliptici et alabastra plus minusve aequantes..... *triflorum*

Folia rotundata, ovato-rotundata vel elliptico-rotundata, semper ultra 1 cm. lata; flores subfasciculati vel rarius ad cymas brevipedunculatas referentes; calycis lobi lineari-obtusi et alabastra aequantes vel superantes..... *macrocalyx*

* cf. *J. Burt Davy*.—The suffrutescent habit as an adaptation to environment. *Journ. of Ecology*, X, p. 211 et sq. (1922).

† *W. Robyns*.—Tentamen Monographiae Vangueriae Generumque affinium. *Bull. Jard. Bot. Etat Brux.*, XI, p. 119 (1928).

Pachystigma triflorum *Robyns* sp. nov., ex affinitate *P. macrocalycis*, sed habitu, foliis ellipticis multo minoribus et calycis lobis ellipticis primo visu distinctum.

Arbor parva, secundum collectores \pm 5 m. alta, multo sed breviter divaricate ramosa; rami ramulique oppositi, cylindracei, cortice cinereo interdum subdeciduo obtecti, glabri; ramuli novelli breves, oppositi, divaricati, teretes, internodiis brevibus vel usque ad 6-8 mm. attingentibus, dense cinereo-tomentelli. *Stipulae* subherbaceae, brevissime vaginato-connatae, subito 0.5-2 m. longe filiformi-subulatae, omnino cinereo-tomentellae, vix scarosae et demum deciduae. *Folia* ad nodos ramorum hornotinorum opposita, mox decidua, breviter petiolata, petiolo 1-1.5 mm. attingente et griseo-tomentello; laminae rigide herbaceae, anguste ellipticae, basi breviter attenuatae, apice plus minusve late obtusae, statu sicco marginibus saepe recurvatis, 1-1.7 cm. longae et 0.5-0.8 cm. latae, utrinque tomentellae sed leviter discolores, pagina superiore leviter glaucescentes at pagina inferiore cinerascens, costa media pagina inferiore distincte prominente, costis secundariis inconspicuis. *Cymae* as nodos ramorum annotinorum plerumque defoliorum insertae, plerumque oppositae, divaricatae, simplices, typice triflorae sed saepe abortu biflorae vel etiam uniflorae, bracteolatae, omnino cinereo-tomentellae, in toto 1.5-1.8 cm. attingentes, distincte pedunculatae, pedunculo crassiusculo et 3.5 mm. longa. *Flores* mediocres, 3.5 mm. longe pedicellati; alabastra oblonga, distincte apiculata, circa 6-7 mm. longa et dense pubescentia; calycis lobi sub anthesin plus minusve patententes, anguste elliptici, apice obtusi, 6 mm. longi, utrinque tomentelli; corollae tubus cylindricus, \pm 2.5 mm. longus, extus dense pubescens, intus medio annulo pilorum reflexorum instructus, lobi lanceolati, appiculati, \pm 4 mm. longi quorum 1.5 mm. pro apiculis, extus breviter pubescentes et intus carnosuli; antherae sessiles, lanceolatae, breviter apiculatae, 1.25 mm. attingentes; stylus gracilis, e basi sensim attenuatus, \pm 4.5 mm. altus; stigma cylindricum, apice distincte 5-lobatum, irregulariter costatum, \pm 1 mm. longum; discus annularis, glaber; ovarium hemisphericum, \pm 1 mm. altum, tomentellum et 5-loculare. *Fructus* pedicello elongato suffultus, globosus, apice calycis lobis auctis coronatus, \pm 6 mm. diametro (an maturus?), sicco nigricans, sparse puberulus, 5-pyrenus.

SOUTH AFRICA.—North-Transvaal: Waterberg, Olifant's Poort, at 9 miles north of Nylstroom, in bush on rocky kopje, rare, tree of about 5 m., flowers pale greenish yellow, December, 1934, *Galpin*, 13198 (typus floriferus) (Herb. Pretor. et Herb. Brux.); Zoutpansberg Range, January, 1925, *Smuts*, in *Nat. Herb.*, 19796 (typus fructiferus) (Herb. Pretor.).

Observation.—This new species can easily be distinguished by the xerophytic habit, the ashy-coloured leaves, the typical 3-flowered cymes and the form and length of the calyx-lobes.