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A NEW SPECIES OF APONOGETON FROM OVAMBOLAND

by

H. W. E. VAN BRUGGEN

During a trip to Ovamboland in 1974 Professor MERXMÜLLER and Mr. W. GIESS collected a species of A p o n o g e t o n which could not be identified.

The herbarium specimens were sent to me for identification. They appeared to belong to an unknown species which will be described below.

I am very grateful to Professor MERXMÜLLER who enabled me to examine and describe the material. Miss VAN CREVEL was kind enough to make the drawing of the new species, Dr. R. C. BAKHUIZEN VAN DEN BRINK prepared the Latin diagnosis and Mr. J. MULLER the pollen analysis.

Aponogeton azureus van Bruggen, sp. nov.
Type: 16 km W of the fork to Ohopoho of the Ruacana-path on the border of a vley, 29. 3. 1974, MERXMÜLLER & GIESS 30 642 (M, holo; K, L, PRE, WIND, iso).

Tuber parvulum, usque ad 1,5 cm diam. Folia primaria probabiliter submersa, linearia ad spathulata, usque ad 7 x 1 cm.

Folia secundaria natantia, (anguste) elliptica vel ovalia, usque ad 9 x 2,75 cm, basi attenuata vel rotundata, apice attenuata mucrone obtuso; nervi primarii paralleli 5; petiolus usque ad 45 cm longus (probabiliter ex aquae altitudine aptus). Pedunculus usque ad 25 cm longus, tantum inflorescentiam versus paulum incrassatus. Spatha usque ad 12 mm longa, caduca. Inflorescentia e spicis duabus usque ad 3,5 cm longis (sat) dense floriferis composita. Flores dorsaliter dispositi; tepala 2, laete azurea, usque ad 2,25 x 1,5 mm, 1-nervia; stamina 6, usque ad 3 mm longa, filamentis basin versus dilatatis; ovaria 3 (-5), usque ad 3 x 1,25 mm; ovula 6 - 8. Infructescentia usque ad 4,5 cm longa; fructus usque ad 6 x 3 mm, rostro terminali longo incluso; semina usque ad 3 x 0,75 mm, testa dupla munita, exterior laxa atque reticulata, interior fusca atque embryonem arcte complectens.

Tuber rather small, up to 1,5 cm diam. Primary leaves probably submerged, linear to spathulate, up to 7 by 1 cm. Secondary leaves floating, (narrowly) elliptic or oval, up to 9 by 2,75 cm, with an attenuate or rounded base and an attenuate apex with a blunt tip; parallel main nerves 5; petiole up to 45 cm (probably depending on the water depth). Peduncle up to 25 cm, only slightly thickening towards the inflorescence. Spathe up to 12 mm, caducous. Inflorescence with 2 spikes of up to 3,5 cm, (rather) densely flowered. Flowers dorsally arranged; tepals 2, luminous clear blue (Professor MERXMÜLLER stated "leuchtend hellblau"), up to 2,25 by 1,5 mm, 1-nerved; stamens 6, up to 3 mm, filament widened towards the base; ovaries 3 (-5), up to 3 by 1,25 mm, ovules 6 - 8. Infructescence up to 4,5 cm; fruits up to 6 by 3 mm, inclusive a long, terminal beak; seeds up to 3 by 0,75 mm, with a double testa, outer one loose and reticulately veined; inner one brown and closely fitting the embryo.

R e m a r k s

A. a z u r e u s resembles A. d e s e r t o r u m in habit and A. j u n c e u s ssp. j u n c e u s with regard to the inflorescence. Viewed superficially one could take it for an intermediate form between these two species. However, it can easily be distinguished from both species with the help of the following table:

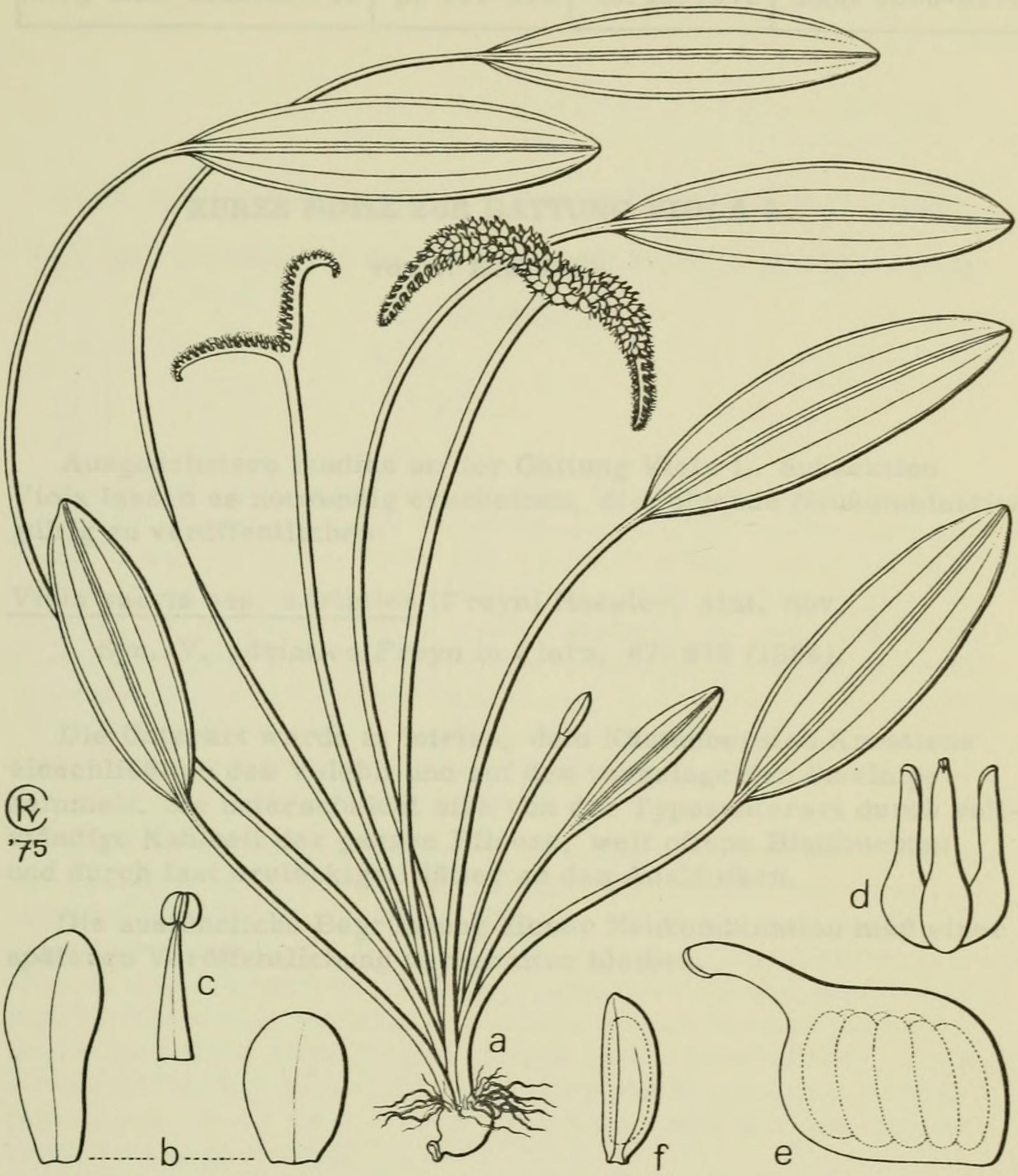
	A. azureus	A. desertorum	A. junceus ssp. junceus
leaves	floating	floating	sub- or emerged
leaf shape	oval	oval	awl-shaped
arrangement of flowers	dorsally	on all sides	dorsally
color of tepals	bright blue	yellow	white
apomicts	never	never	very often
testa	double	double	simple
plumule	absent	absent	present

A. a z u r e u s can be inserted in the key to the African species of A p o n o g e t o n (see Bull. Jard. Bot. Nat. Belg. 43 (1973), p. 196) as follows:

13. Tepals shorter than 5 mm:
  15. Seed with a double testa:
    16. Flowers dorsally arranged; tepals bright blue ..... A. azureus
    16. Flowers turned towards all directions:
      17. Tepals mauve or violet; seeds up to 2 mm, with a tight-fitting outer testa; specimens often apomictic ..... 12. A. abyssinicus
      17. Tepals white, seeds longer than 3 mm, with a loose outer testa ..... 9. A. desertorum
  15. Seed with a simple testa; specimens often apomictic:
    18. Flowers dorsally arranged; leaves awl-shaped, seldom gradually expanded into a very narrowly lanceolate blade ..... 13. A. junceus ssp. junceus
    18. Flowers turned towards all directions; leaves with a distinct blade:
      19. Inflorescence ± 5 cm long; leaves mostly submerged or emerged; ovules mostly 2; embryo with plumule ..... 13. A. junceus ssp. natalense
      19. Inflorescence ± 1,5 cm long; leaves almost always floating; ovules mostly 4; embryo without plumule 13. A. junceus ssp. rehmannii

Pollen morphology

The pollen grains are monosulcate, tectate-foveolate and microechinate. They do not deviate markedly from the type generally found in the genus.



Aponogeton azureus van Bruggen. - MERXMÜLLER & GIESS 30 642.

a Habit. b Tepals. c Stamen. d Gynaecium. e Fruit. f Seed.

a: 0,85 x; b - f: 13,7 x

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