Aloe bernardii, a new Aloe (Asphodelaceae) from the region of Ikalamavony, Madagascar.

Jean-Philippe Castillon (La Reunion)

Introduction

From the Southern Itremo range, as far as the Ikalamavony town, lies a vast area, more or less unexplored, made of mountains and hills resembling those of Itremo and flatter grassy areas, where certainly unknown species of Aloe remain to be discovered. A first species, *A. spinitriaggregata* J.-B. Castillon, found a year ago at the southern end of Itremo and which flowered for us for the first time was photographed in May 2010 and will be described in a forthcoming issue of *Cactus Adventures International*. Another, from the same area where I could see the inflorescences in August 2010, is described in the following: there is a spike *Aloe*, unlike any other species with sessile flowers in Madagascar, and may be one of the best for pot cultivation.

Aloe bernardii, J P-Castillon, species nova.

Locus typicus: rocky hills in the extreme south of the Itremo in the direction of Ikalamavony; alt: 1700-1800 m.

Typus: JB Castillon, July 2010, No. 49, (Holo, TAN, Iso, TAN, P)

Diagnosis: Planta acaulis, carnosa, solitaria sine virgultis; racemis, *A. macrocladae* Baker affinis est sed ab ista, foliis minoribus, obscure fusco-viridibus and paulum spinosis, inflorescentia minore (78 cm contra 175 cm), floribus paulum campanulatis, praecipue differt.

Aloe bernardii en fleurs.
(photo : J.P. Castillon).

Aloe bernardii gros plan sur l'inflorescence.
(photo : J.P. Castillon).

Etymology: In honour of Jean-Bernard Castillon who described a number of taxa within the genus *Aloe*, in Madagascar.

Description

Plant stemless, solitary, without suckers. Leaves 20-30 rosulate, with exudate [liquid which has exuded through pores] colorless to clear yellow sparse and very bitter, triangular with a rounded end, lower ones spreading, others a little erect, 17-22 cm long, 7-9 cm broad at the base of 7-9 cm, uniformly 1 cm thick, dull reddish-green, without spots or lines; mesophyll [layers of a leaf that lie between the upper and lower epidermis] cells translucent 1 cm thick; upper surface flat or very few concave, bottom flat or slightly convex; margin with spines mainly on half or 2/3 inferior length; spines yellow, 1mm high on a brilliant dark red 3-4mm wide base, 1 cm apart or sometimes totally absent.

Inflorescence 78 cm high, base-section more or less elliptical 2·5 1-2 cm. Peduncle 34-46 cm long, 15 mm in diameter near the spike, carrying, 20 cm above its base, large red-dark brown triangular fleshy sterile bracts 2 cm wide and 3 cm high; the upper bracts more numerous (up to 10-13), smaller and more densely clustered. Spike very densely flowered, cylindrical 12-33cm long depending on the strength of the plant, first with a diameter of 3-4 cm then 6-7 cm when the flowers open; floral bracts of a

general brown color, 10 dark nerved, ovoid, 1 cm broad at the base and 1·5 cm with translucent margins; the first flowers to open are the higher and those exposed to sunlight. Perianth sessile, 20 8 mm, red brown, clavate; outer tepals ovate elongate, 20 5 mm, completely free, margin 1 mm wide white, white green and dark red base to the tip, inner tepals similar but more clear and bearing a dorsal keel strongly marked; filaments of 34 mm, white green at the base, brown at the tip of anthers exserted at anthesis 16 mm and 2 mm, but similar style to the filament long 28 mm stigma of First exserted 5mm and 10 mm when the flower fades; ovarian small 4 2 mm, olive green. Fruit a capsule of approximately 15 8 mm. Seeds small 1·5 mm.


Aloe bernardii, fleur et bractée florale. A dr., allure générale de la plante (photos : J.P. Castillon).

Comments

This species is intermediate between *A. conifera* Perrier and *A. macroclada* Baker; it is close to *A. conifera* by its small size, a stem of similar length and flowers of the same shape but differs by the very special color of its leaves and the spike which is cylindrical; it is similar to *A. macroclada* because of its color and texture of the leaves which are shorter (17 cm instead of 60-80) and the raceme which is cylindrical. Spines and their bases are unique in the genus! The leaves have a shiny ceraceous [waxy] epidermis and bases of yellow spines are of a brilliant dark red color; the mesophyll about 1 cm thick has the strange distinctive feature that, when the leaf dries, its disappears completely, leaving a gap between the upper and lower epidermis, a phenomenon I've yet found only with this plant. There is also an obvious relationship between this plant and *Aloe johannis-philippei* J.-B. Castillon, from the Andringitra range, which is maybe its nearest relative.

Text & photos: J-P Castillon, University of La Reunion
E-mail :**jp.castillon@wanadoo.fr**

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