

## A RECONSIDERATION OF *UROSPATHELLA* (ARACEAE)

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### ABSTRACT

The relationships of *Urospathella* are discussed; anatomical data of the seed are presented to support its separation from *Urospatha* and information justifying its exclusion from *Cyrtosperma* is evaluated.

KEY WORDS: *Urospathella*, Araceae, Neotropics, anatomy.

The genus *Urospathella* Bunting has a single species, *Urospathella wurdackii* (Bunting) Bunting, a small plant known to occur only in white sand savannas of Amazonian Venezuela. It differs from *Urospatha sagittifolia* (Rudge) Schott by its slender habit, oblong or elliptic leaf blades lacking posterior lobes and a unilocular ovary with two sub-basal ovules. The lack of precise data concerning the presence of endosperm in the seed has caused speculation about its correct generic placement. Originally described in the genus *Cryptosperma*, it has subsequently been transferred to *Urospatha* (Hay 1988) and then to *Urospathella* (Bunting 1988).

Recent study of a seed of *Urospathella wurdackii*, by Dr. James C. French at Rutgers University, revealed that the seed "most definitely contains endosperm [with the] large plump embryo surrounded by a layer of cells filled with lipid droplets and small irregular crystalline particles." He "did not determine if they were starch, but their birefringence was not typical of starch grains. Outside the endosperm was the thick seed coat." Dr. French has "no doubt about the presence of endosperm in *U. [Urospathella] wurdackii*. The other species, . . . sent [*Urospatha sagittifolia*], reputed to lack endosperm, differed in lacking this lipid-rich layer of cells."

The albuminous nature of the seeds of *Urospathella wurdackii* obliges a reconsideration of the genus *Urospathella*, since the seeds were originally described as apparently without endosperm. With this character negated, the slender habit of this species and its leaf form remain the chief morphological features to distinguish it from *Cyrtosperma* (cf. Hay 1988). Even the sparsely and finely verruculose condition of the petiole suggests the spiny condition well developed in *Cyrtosperma*. However, the petiole of *Urospathella wurdackii* does



not appear to be geniculate as in the latter genus. Moreover, the geographic isolation of this species in north-central South America reinforces its segregation from *Cyrtosperma*, now considered to be an entirely Asian genus.

Hay (1988 and in personal correspondence) indicated that the Neotropical species previously placed in *Cyrtosperma* must, on the basis of their exalbuminous seeds or aspect, be excluded from this genus. These include the following:

"*Cyrtosperma americanum* Engl. in Martius = *Anaphyllopsis americana* (Engl.) A. Hay, ined.

*Cyrtosperma spruceanum* (Schott) Engl. = *Dracontium* sp.

*Cyrtosperma wurdackii* Bunting = *Urospatha wurdackii* (Bunting) A. Hay, comb. nov."

The last transfer was formally made, but because this species has seeds with endosperm, its inclusion in *Urospatha* is untenable. Further, Hay's comments about the comparable unilocular condition of the ovary of this species and that of *Urospatha savannarum* Steyermark. (Publ. Field Mus. Nat. Hist. Bot. Ser. 28:102. 1951) seem tenuous. The type specimen of this latter name cannot be located for restudy to verify the unilocular condition of its ovary with a single ovule arising from the base at one side, as described by Steyermark. It is my experience that the removal of a pistil from a spadix of *Urospatha*, done even with great care, often results in all or part of the ovules, together with the very short partition, remaining fast to the axis of the spadix and being pulled out of the ovary rather than remaining *in situ* in the latter. Until its ovary characters can be verified, it appears unwise to consider *Urospatha savannarum* in these discussions, since the drawing accompanying its original description depicts a plant very similar in both foliage and inflorescence to a young plant of the widespread *Urospatha sagittifolia* (Rudge) Schott *sensu lato*.

#### NOMENCLATURE SYNOPSIS

*Urospathella wurdackii* (Bunting) Bunting, Phytologia 65:391. 1988. *Cyrtosperma wurdackii* Bunting, Acta Bot. Venez. 10:285. 1975. *Urospatha wurdackii* (Bunting) A. Hay, Blumea 33:457. 1988.

#### ACKNOWLEDGMENTS

I am very grateful to Dr. James C. French, of Rutgers University, for determination of the endosperm content of seeds of pertinent material and to Dr. D.H. Nicolson and Dr. T. Croat for their reviews of the manuscript.

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Bunting, George S. 1989. "A reconsideration of Urospathella (Araceae)."  
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**DOI:** <https://doi.org/10.5962/bhl.part.26144>

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