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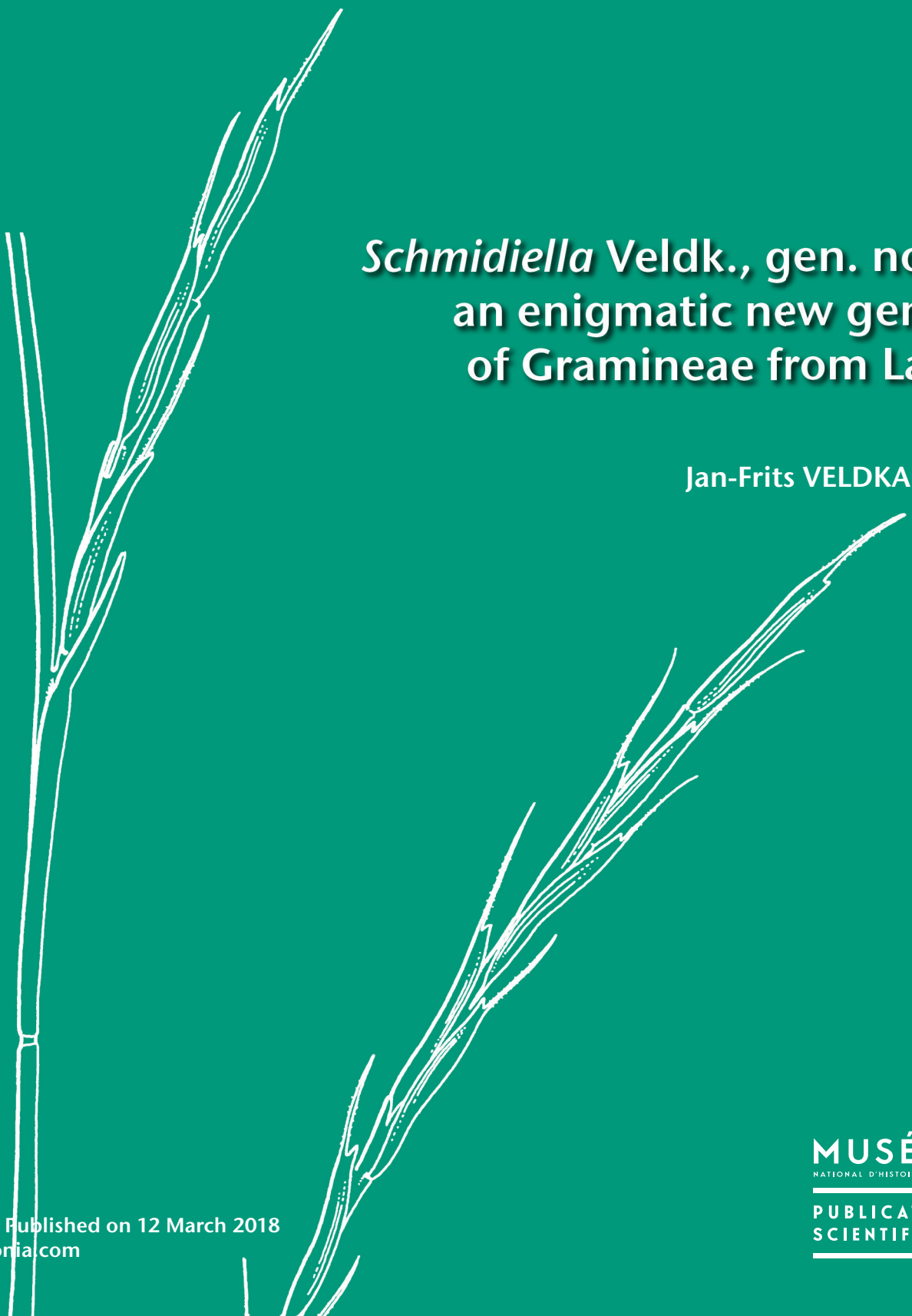
Jan-Frits VELDKAMP†



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Schmidiella maxwellii Veldk., gen. nov., sp. nov. (Fig. 1)

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Schmidiella Veldk., gen. nov., an enigmatic new genus of Gramineae from Laos

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KEY WORDS
Dimeria,
Nardus,
Poaceae,
new genus,
new species.

ABSTRACT
Schmidiella Veldk., gen. nov., a new herbaceous grass genus of uncertain (sub)tribal affinities is described for Laos, based on a single gathering of J.F. Maxwell. This genus exhibits indeed an unexpected combination of morphological features from Dimeriinae and Nardeae, phylogenetically very remote tribes.

MOTS CLÉS
Dimeria,
Nardus,
Poaceae,
genre nouveau,
espèce nouvelle.

RÉSUMÉ
Schmidiella *Veldk., gen. nov., un genre énigmatique de Graminées du Laos.*
Schmidiella Veldk., gen. nov., un nouveau genre de Graminées herbacées d'affinité (sub)tribale incertaine est décrit pour le Laos, établi sur une récolte unique de J.F. Maxwell. Ce genre présente en effet une combinaison inattendue de caractères morphologiques de deux tribus très éloignées phylogénétiquement : les Dimeriinae et les Nardeae.

INTRODUCTION

The late James F. Maxwell (1945-2015) in April 2007 collected a curious grass in the Champhone Distr., Savannakhet Prov., Laos. I have tried to identify it with various general and local publications and the DELTA programs "Grass genera of the World" (descriptions printed out in Watson & Dallwitz 1992), the "Online World Grass Flora" (Clayton *et al.* 2006), and material present in L. Nowhere did I find a satisfactory match and so must conclude that an undescribed genus and species are involved. Without molecular studies its (sub) tribal affinities are not clear.

The plants have some aspects of *Dimeria* R. Br., belonging to the bigeneric *Panicoideae-Dimeriinae* Hack. *ex* C.E. Hubb., because of the laterally flattened spikelets in two rows laterally appressed against the rachis, but they differ by the rim-like, ciliolate ligule, absence of any trace of a pedicel, absence of glumes, the subapically awned lemma (not from a sinus), the 1-nerved palea, three stamens, one stigma (all exserted from the apex of the floret), the linear hilum, etc.

There is also a resemblance to the temperate monotypic *Nardus* L., the sole member of the *Pooideae-Nardeae* W.D.J. Koch, in the shape of the inflorescence, the awned lemma, absence of lodicules, the apical emergence of the 2 anthers, the single stigma, and a long caryopsis with a long hilum. On the other hand, *Nardus stricta* L. is a perennial, the ligule a membrane, the spikelet is adaxial, triangular in *c.s.*, inserted in a cupule (vestigial glumes), the awn is terminal, the palea is 2-nerved, stamens 3, etc. The Dimeriineae and Nardeae tribes are yet considered as very remote in the most recent phylogenetic classification (Soreng *et al.* 2017: 261).

The interpretation of the spikelets here is unclear. There are only two chaffs: a large one, 3- or 5-nerved, awned, clasping a narrow 1-nerved one, and either the anthers or a caryopsis. I have assumed that the glumes are absent and that these chaffs represent a lemma and a palea. Paleas are usually 2-nerved, though.

The spikelets are apparently strongly protandrous: i.e., I have only seen anthers and at most a minute basal structure with a terminal filiform appendage, presumably the ovary and style, or with a more or less developed caryopsis. In order not to damage the material too much I have not pursued this any further.

TAXONOMIC TREATMENT

Schmidiella Veldk., gen. nov.

Annuae. Ligula series puberula. Inflorescentia spica espatheata contracta solitaria simplex glabra, axe triquetro tenaci spicula terminato. Spiculae sessiles lateraliter appressae, lateraliter complanatae. Callus obtusus. Glumae desunt. Lemma 3- vel 5-nervatum arista subapicali recta simplici. Rhachillae processus deest. Palea 1-nervata. Lodiculae desunt. Stamina 2, antherae terminaliter exsertae. Stigma 1, terminaliter exsertum. Caryopsis tereta linearis dorsaliter sulcata laevis.

Type species. — *Schmidiella maxwellii* Veldk., sp. nov.

Distribution. — Laos.

Etymology. — Named for Dr Maurice Schmid (1922-*hodie*), former Inspecteur général de Recherches de l'ORSTOM, agronomist, botanist (Indochinese Gramineae, New Caledonian Myrsinaceae, Phyllanthaceae) at the Muséum national d'Histoire naturelle, Phanérogamie, Paris, France, in thankful recognition of his "Flore agrostologique de l'Indochine". See also http://www.academieoutremer.fr/academiciens/fiche.php?aId=57 (biography, portr.).

Description

Annual. Ligule a row of hairs. Inflorescence an espatheate, contracted, solitary, simple, glabrous spike, common axis triquetrous, tenuous, ending in a spikelet. Spikelets sessile, laterally appressed. laterally flattened. Callus obtuse. Glumes absent. Lemma 3- or 5-nerved with a subapical, straight, simple awn. Rachilla process absent. Palea 1-nerved. Lodicules absent. Stamens 2, anthers exserting terminally. Stigma 1, exserting terminally. Caryopsis terete, linear, dorsally sulcate, smooth.

Schmidiella maxwellii Veldk., sp. nov.
(Fig. 1)

Caespitosus, culmi ad 20 cm alti nodis glabris. Laminae erecto-patentes rigidae persistentes ad 12 cm longae 0.5 mm in diam., glabrae, costa nervis subaequales, margines involuti, apex acutus. Spiculae proterandrae lineares 4.8-5.5 mm longae c. *0.5 mm latae, callo glabro, nervis si 5 lateralibus arte approximatis, apice acuto, arista 2-4.5 mm longa antrorse scaberula. Palea plicata lanceolata 4.5-5 mm longa acuta. Antherae lineares* c. *3 mm longae. Caryopsis* c. *3 mm longa 0.4 mm lata.*

Typus. — **Laos**. Savannakhet Prov., Champhone Distr., Huay So(u)y Reservoir, N. side of the Don Yaeng island, elevation 125 m. 20-IV-2007, *Maxwell 07-164* (holo-, L[L3963931]; iso-, CMU).

Distribution and habitat. — Laos, only known from the type collection. Open, sandy, dry area, seasonally submerged, in deciduous hardwood forested area.

Etymology. — In memory of the collector, my good friend the late James F. Maxwell (1945-2015).

Description

Culms caespitose, up to 20 cm tall, nodes glabrous. Blades erecto-patent, rigid, persistent, up to 12 cm by 0.5 m in diam., glabrous, nerves subequal to the midrib, margins involute, apex acute. Spikelets protandrous, linear, 4.8-5.5 by *c.* 0.5 mm, callus glabrous, nerves when 5 close to the lateral ones, apex acute, awn 2-4.5 mm long, antrorsely scaberulous. Palea folded, lanceolate, 4.5-5 mm long, acute. Anthers linear, *c.* 3 mm long. Caryopsis *c.* 3 by 0.4 mm.

Collector's notes

Annual. Matted, densely clustered. Culms pale green. Leaves dull pale green on both sides. Spikelets pale green, turning stramineous. Awns whitish.

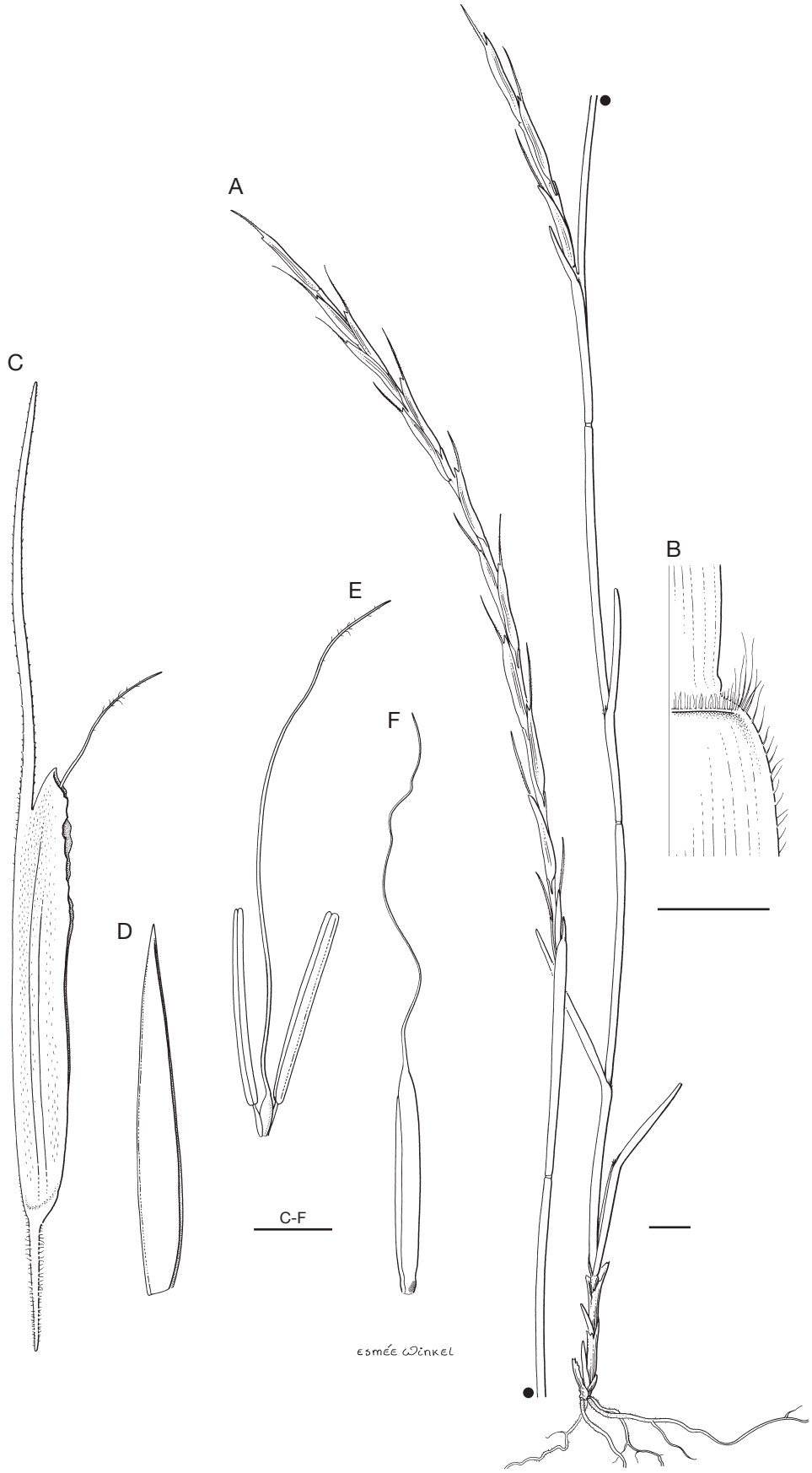

Fig. 1. — *Schmidiella maxwellii* Veldk., gen. nov., sp. nov.: **A**, habit; **B**, sheath/ligule/blade; **C**, spikelet; **D**, Palea; **E**, anthers/ovary/style; **F**, caryopsis/style (L3963931). Scale bars: A, 1 cm; B-F, 1 mm.

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Our colleague sadly passed away on 12th November, 2017;
the last version of this paper was prepared by the editorial board.