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Cover images: *Mapania sembilangensis* Miraadila, Shabdin & Meekiong. A. Habit; B. Leaf apex details; C. Sheath margin details; D. Capitata inflorescence; E. Spike; F. Spicoid bract [Drawing by Meekiong, K.].

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A NEW SPECIES OF *SCHIZOSTACHYUM* (POACEAE: BAMBUSOIDEAE) FROM SUMBA ISLAND, INDONESIA

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ABSTRACT

DAMAYANTO, I P. G. P. & WIDJAJA, E. A. 2016. A new species of *Schizostachyum* (Poaceae: Bambusoideae) from Sumba Island, Indonesia. *Reinwardtia* 15(2): 119 – 122. — *Schizostachyum purpureum* Damayanto & Widjaja is a new species from Sumba Island. Its description and illustration are presented.

Key words: New species, *Schizostachyum purpureum*, Sumba Island.

ABSTRAK

DAMAYANTO, I P. G. P. & WIDJAJA, E. A. 2016. Jenis baru *Schizostachyum* (Poaceae: Bambusoideae) dari Pulau Sumba, Indonesia. *Reinwardtia* 15(2): 119 – 122. — *Schizostachyum purpureum* Damayanto & Widjaja adalah jenis baru dari Sumba. Pertelaan dan gambar disajikan.

Kata kunci: Jenis baru, Pulau Sumba, *Schizostachyum purpureum*.

INTRODUCTION

Schizostachyum Nees is one of the native genus in Indonesia. Nees described the *Schizostachyum* for the first time in 1829 based on one species, *S. blumei* Nees ('blumii') (Dransfield, 1983; Yang *et al.*, 2007). After that, many species have been described. There are 45 to 50 species of *Schizostachyum* distributed from South China through South East Asia to the Pacific (Widjaja, 1997). According to Dransfield & Widjaja (1995), there are 30 species of *Schizostachyum* in South East Asia, wild and cultivated mostly in lowland. It is suggested that there are *ca.* 24 species of *Schizostachyum* found in Indonesia (Widjaja, 1997).

Widjaja & Karsono (2005) recognized 2 species of *Schizostachyum* from Sumba Island. Recently, Damayanto found another species during his exploration to Sumba Island. Although without inflorescence, this species can be recognized easily by its equal and subequal branchings (no dominant middle branch), leaf blade with conspicuous auricle, few bristles on leaf sheath, and purplish shoot blades. Since it can not be matched with other known member of the genus, it is proposed as a new species of *Schizostachyum*.

Schizostachyum purpureum Damayanto & Widjaja, *spec. nov.* — Fig. 1.

This species is similar to *Schizostachyum bamban* Widjaja (Widjaja, 1997) by its truncated apex of culm

sheath, inconspicuous culm sheath and leaf sheath auricles. It can be distinguished from *Schizostachyum bamban* by its purplish green shoot; purplish, spreading and shorter culm sheath blade; serrate and glabrous leaf sheath ligules. — Type: Indonesia, East Sumba, TN Laiwangi-Wanggameti, Laiwangi area, along the road to Laputi Lake, 29 April 2016, *Damayanto & Mahendra 143* [(Holotype BO! Accession No. BO-1935811! (culm sheath); BO-1935813! (shoot); BO-1935816! (leafy branch) ; K Isotype)].

Sympodial, densely tufted bamboo. *Shoot* purplish green with white hairs. *Culms* erect with pendulous tips, 5–6 m high, 4–5 cm diameter, internode 50–65 cm, walls thin, green, covered by white to light brown hairs at the node and has circular white wax. *Branch* complements subequal, develop about 2 m from ground. *Culm sheaths* up to 14.6–23 × 17.2 cm, not easily fall; margin of culm sheath with white to light brown hairs up to 1 mm long; apex truncated; auricles inconspicuous, glabrous or sometime with few bristle (1–5 mm long) at the outer end; ligule serrate, 1–2 mm high and glabrous; sheath blades purplish, concave and spreading, narrowly triangular, 13–17 × 1.2–2 cm, white to light brown hairs on the abaxial side. *Leaves* 21.5–26.6 × 3.5–4.0 cm, slightly pubescent beneath; leaf sheath auricle inconspicuous with few bristles 1–5 mm long; ligule serrate 1–1.5 mm high and glabrous. *Inflorescences* not seen.

Distribution. This species is only known from the type locality in East Sumba, Lesser Sunda Islands.

Habitat. Primary forest and on the margin of the primary forest at 525 m alt.

Vernacular Name. *Au tamiang*.

Uses. This bamboo is used for making mat (*gedeg*) and flute (*seruling*).

Notes. The epithet *purpureum* is based on the purplish shoot blade which is uncommon in the genus *Schizostachyum*. The similarity of *S. purpureum* and *S. bamban* can be seen at Table 1. This species also differs from *S. castaneum* Widjaja (Widjaja, 1997) because the latter has green shoots with densely brown to chestnut-colored shoots hairs; erect, concave, ovate-oblong culm sheath blade; auricle of the culm sheath extend along to sheath apex up to the blade base, up to 2 mm high with bristles 4–11 mm long.

Conservation Status. So far, only 2 clumps of this species have been found, one in the primary forest is still growing although very badly, the other in the primary forest margin has been cut off and left only 5 culms. So, a further study on this bamboo species should be done to ascertain its conservation status.

Specimens Examined. Lesser Sunda Islands. Sumba Island: East Sumba, TN Laiwangi-Wanggameti, Laiwangi area, along the road to Laputi lake, *Damayanto & Mahendra 143* (BO, K), *151* (BO).

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REFERENCES

- DRANSFIELD, S. & WIDJAJA, E. A. 1995. *Introduction*. In: DRANSFIELD, S. & WIDJAJA, E. A. *Plant Resources of South-East Asia No. 7. Bamboos*. Backhuys Publishers, Leiden. Pp. 15–49.
- DRANSFIELD, S. 1983. Notes on *Schizostachyum* (Gramineae-Bambusoideae) from Borneo and Sumatra. *Kew Bulletin* 38(2): 321–332.

Table 1. *Schizostachyum purpureum* Damayanto & Widjaja compared with closely related species

	<i>S. purpureum</i>	<i>S. bamban</i>	<i>S. castaneum</i>
Shoot	Purplish green with white hairs	Green with white hairs	Green with densely brown to chestnut-colored hairs
Branching	Above 2 m from ground	Above 1.5 m from ground	Above 1.5 m from ground
Culm	Green, covered by white to light brown hairs	Green, covered by brown hairs bellow the node	Green, covered by white to brownish scattered hairs
Culm high	5–6 m high	Up to 10 m high	Up to 15 m high
Culm internodes	50–65 cm long	40–80 cm long	45–70 cm long
Culm diameter	4–5 cm	2–8 cm	4.5–6 cm
Culm sheath apex	Truncated	Truncated to slightly recessed in the middle	Slightly recessed in the middle to truncated
Culm sheath auricles	Inconspicuous, glabrous or sometimes with few bristle 1–5 mm long	Inconspicuous to rim-like with bristles up to 10 mm long	Extending along to sheath apex up to the blade base, up to 2 mm high with bristles 4–11 mm long
Culm sheath ligule	Serrate 1–2 mm high, glabrous	Denticulate up to 1 mm high with bristles up to 3 mm long	Denticulate up to 1 mm high with bristles up to 1 mm long
Culm sheath blade	Purplish, spreading, concave, narrowly triangular, 13–17 × 1.2–2 cm	Erect, slightly concave, narrowly triangular, 12–26.5 × 1.5–2.5 cm	Green, erect, concave, ovate-oblong, 5–7 × 2.3–2.7 cm
Hairs on culm sheath margin	White to light brown hairs up to 1 mm long	Glabrous	Glabrous
Leaf blade	Slightly pubescent beneath	Glabrous	Hairy beneath
Leaf sheath auricles	Inconspicuous with few bristles 1–5 mm long	Inconspicuous with bristles up to 6 mm long	Curved outward up to 1 mm high with bristles 7–9 mm long
Leaf sheath ligule	Serrate 1–1.5 mm high, glabrous	Denticulate up to 1 mm high with bristles up to 2 mm long	Entire up to 1 mm high, glabrous

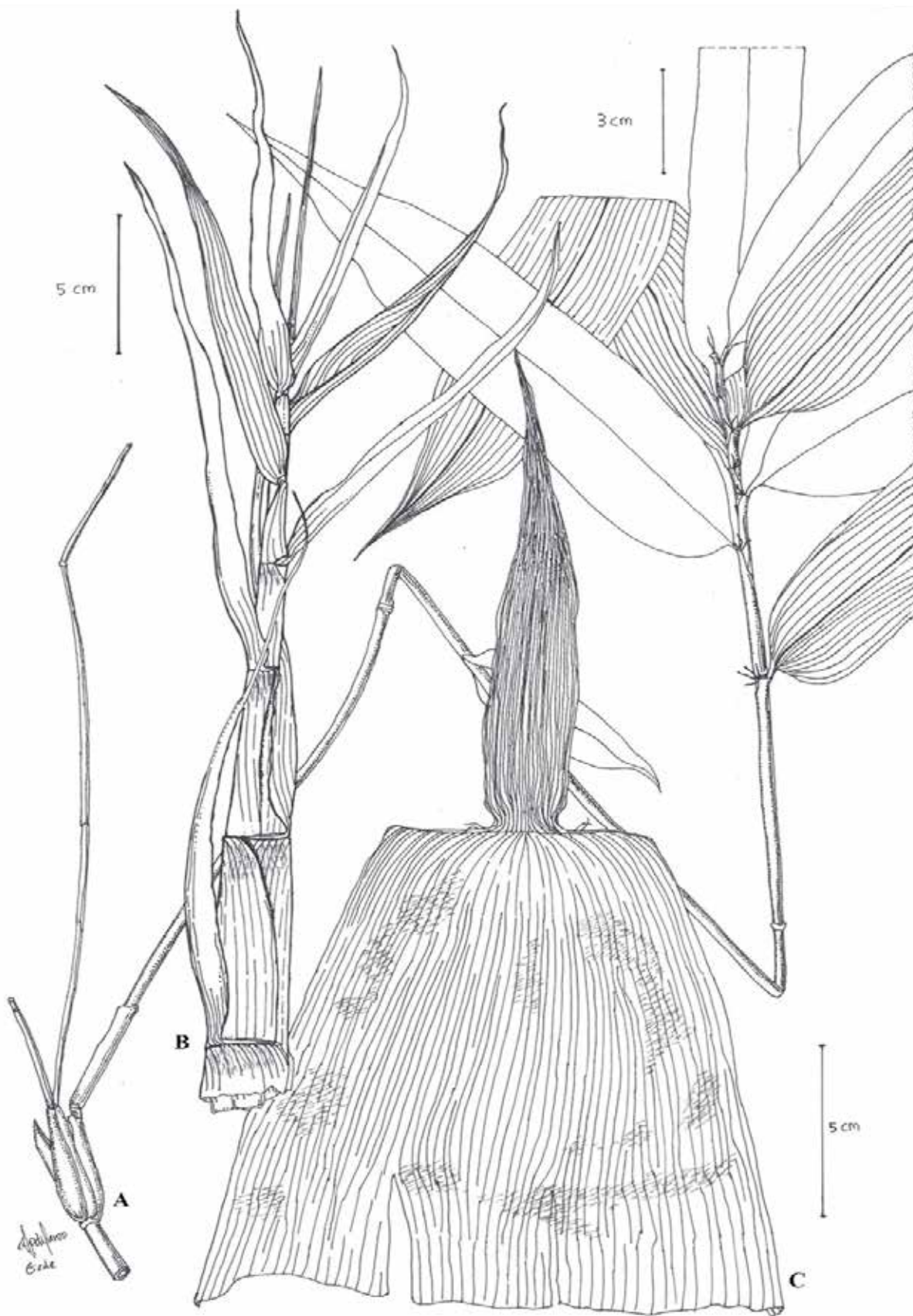


Fig. 1. *Schizostachyum purpureum* Damayanto & Widjaja. A. Leafy branch. B. Shoot. C. Culm sheath, showing inconspicuous auricles. (Drawing by I Putu Gede P. Damayanto from *Damayanto & Mahendra 143* (BO)).

- WIDJAJA, E. A. 1997. New taxa in Indonesian bamboos. *Reinwardtia* 11(2): 57–152.
- WIDJAJA, E. A. & KARSONO. 2005. Keanekaragaman bambu di Pulau Sumba. *Biodiversitas* 6(2): 95–99.
- YANG, H. Q., PENG, S. & LI, D. Z. 2007. Generic delimitations of *Schizostachyum* and its allies (Gramineae: Bambusoideae) inferred from GBSSI and trnL-F sequence phylogenies. *Taxon* 56: 45–54.

INSTRUCTION TO AUTHORS

Scope. *Reinwardtia* is a scientific irregular journal on plant taxonomy, plant ecology and ethnobotany published in June and December. Manuscript intended for a publication should be written in English.

Titles. Titles should be brief, informative and followed by author's name and mailing address in one-paragraphed.

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Map/line drawing illustration/photograph. Map, line drawing illustration, or photograph preferably should be prepared in landscape presentation to occupy two columns. Illustration must be submitted as original art accompanying, but separated from the manuscript. The illustration should be saved in JPG or GIF format at least 350 pixels. Legends or illustration must be submitted separately at the end of the manuscript.

References. Bibliography, list of literature cited or references follow the Harvard system as the following examples.

- Journal : KRAENZLIN, F. 1913. *Cyrtandraceae* novae Philippinenses I. *Philipp. J. Sci.* 8: 163–179.
MAYER, V., MOLLER, M., PERRET, M. & WEBER, A. 2003. Phylogenetic position and generic differentiation of *Epithemateae* (*Gesneriaceae*) inferred from plastid DNA sequence data. *American J. Bot.* 90: 321–329.
- Proceedings : TEMU, S. T. 1995. Peranan tumbuhan dan ternak dalam upacara adat “Djoka Dju” pada suku Lio, Ende, Flores, Nusa Tenggara Timur. In: NASUTION, E. (Ed.). *Prosiding Seminar dan Lokakarya Nasional Etnobotani II*. LIPI & Perpustakaan Nasional: 263–268. (In Indonesian).
SIMBOLON, H. & MIRMANTO, E. 2000. Checklist of plant species in the peat swamp forests of Central Kalimantan, Indonesia. In: IWAKUMA, T. *et al.* (Eds.) *Proceedings of the International Symposium on: Tropical Peatlands*. Pp.179-190.
- Book : RIDLEY, H. N. 1923. *Flora of the Malay Peninsula* 2. L. Reeve & Co. Ltd, London.
- Part of Book : BENTHAM, G. 1876. *Gesneriaceae*. In: BENTHAM, G. & HOOKER, J. D. *Genera plantarum* 2. Lovell Reeve & Co., London. Pp. 990–1025.
- Thesis : BAIRD, L. 2002. *A Grammar of Kéo: An Austronesian language of East Nusantara*. Australian National University, Canberra. [PhD. Thesis].
- Website : <http://www.nationaalherbarium.nl/fmcollectors/k/KostermansAJGH.htm>). Accessed 15 February 2012.



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