

BAMBOO SPECIES (POACEAE: BAMBUSOIDEAE) FROM SELAYAR ISLAND

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Alin Liana, Purnomo, Issirep Sumardi & Budi Setiadi Daryono. 2017. Jenis-jenis Bambu (*Poaceae: Bambusoideae*) dari Pulau Selayar. *Floribunda* 5(6): 185–191. — Delapan spesies dan satu varietas *Bambusoideae* dilaporkan pertama kali dari Pulau Selayar di Sulawesi Selatan. Berdasarkan hasil survei yang dilakukan, jenis-jenis tersebut yaitu *Bambusa blumeana* Schult.f., *Bambusa maculata* Widjaja, *Bambusa vulgaris* Schard., *Bambusa vulgaris* Schard. var. *vittata*, *Bambusa* sp., *Dendrocalamus asper* (Schult.) Backer, *Gigantochloa atter* (Hassk.) Kurz, *Schizostachyum blumei* Ness, dan *Schizostachyum brachycladum* (Kurz) Kurz. Deskripsi taksonomis dan gambar disajikan.

Kata Kunci: Bambu, Pulau Selayar, Sulawesi.

Alin Liana, Purnomo, Issirep Sumardi & Budi Setiadi Daryono. 2017. Bamboo Species (*Poaceae: Bambusoideae*) from Selayar Island. *Floribunda* 5(6): 185–191. — Eight species and one variety of *Bambusoideae* are reported for the first time from Selayar Island in South Sulawesi. Based on the results of field survey, those species are namely *Bambusa blumeana* Schult.f., *Bambusa maculata* Widjaja, *Bambusa vulgaris* Schard., *Bambusa vulgaris* Schard. var. *vittata*, *Bambusa* sp., *Dendrocalamus asper* (Schult.) Backer, *Gigantochloa atter* (Hassk.) Kurz, *Schizostachyum blumei* Ness, and *Schizostachyum brachycladum* (Kurz) Kurz. Taxonomic descriptions and figures are provided.

Keywords: Bamboo, Selayar Island, Sulawesi.

Bamboo is giant member of *Poaceae* belongs to subfamily *Bambusoideae*. Total number of bamboo in the world is ca.1,439 species in 116 genera (Bamboo Phylogeny Group 2012) and Indonesia has around 10% of the world bamboo species (Widjaja & Karsono 2005). Local people in Indonesia are using bamboo for transportation, household or construction means, handicraft, and also in ceremonial or symbolic event (Joedawinata 2014). With these multiple uses, bamboos continue to play important roles in the economy and life style (Das et al. 2008).

Selayar Island is one of the small islands located in the Southern part of Sulawesi (Celebes). The total area of the dry land is 1,357.03 km² (Statistics of Selayar Archipelago Regency 2010). Due to its geographical position, Selayar Island is assumed to have considerable biological diversity. Herbarium Bogoriense is housed for bamboo specimen from Sangihe and Sulawesi but none from Selayar. Since no record of bamboos growing in this island, an exploration was undertaken there and the result is herewith reported.

MATERIALS AND METHODS

Study Area. Selayar Island situated in 5°45'–6°30'13" South Latitude and 120°20'.48"–120°57'10" East Longitude, with an elevation of 0 to 608 meters height of sea level.

Field surveys. Surveys were conducted during October–November 2014 in the edge of the forest near human settlement, banks of river, slopes around Bitombang, Bahorea, Lebo, Kolokolo, and Tabang.

Sample Observations. Samples were observed directly on the sites in fresh condition and documented, then dried to be herbarium specimens. Identification of the collected specimen was referred to Dransfield & Widjaja (1995) and Widjaja (2001).

RESULTS AND DISCUSSION

Bamboos species discovered in Selayar Island are common species for Indonesia, except *Bambusa* sp. This research is expected to be a preliminary study for further research such as in depth

study of bamboo diversity or genetic relationship.

Eight species and one variety of bamboos are recorded from Selayar Island, namely *Bambusa blumeana*, *Bambusa maculata*, *Bambusa vulgaris*, *Bambusa vulgaris* var. *vittata*, *Bambusa* sp., *Dendrocalamus asper*, *Gigantochloa atter*, *Schizostachyum blumei* and *Schizostachyum brachycladum*. The present study indicates that Selayar Island is one of the biodiversity rich regions for bamboo. Detailed features comprising scientific name, synonyms, local name in Selayar Island, taxonomic descriptions, figures, habitat, distribution, and traditional uses of species is provided below.

Bambusa blumeana Schult.f. (Figure 1)

Synonyms: *Bambusa spinosa* Blume ex Nees (1825), *B. pungens* Blanco (1837), *B. arundo* Blanco (1845).

Local Name: Uhu' Duri, Bulu Katinting

Description: Forming dense clumps. Culm shoots with yellowish-green sheaths and blades.

Culm erect, slightly zigzag, diameter 7.2 cm; internodes glossy green, glabrous, usually hollow, 28 cm long; nodes prominent, the lower ones beset with aerial roots. Branches arising from nearly all nodes, main branches elongated and vine-like, the lower ones spreading horizontally and coiled around culm, developing as spines. Culm sheath up to 30 cm × 25 cm, caducous, densely covered with dark brown hairs; blade erect, up to 11 cm × 6 cm; ligule irregularly toothed; auricles lengthwise. Leaf blade lanceolate, 13.5 cm × 2.5 cm; ligule flat; auricles small.

Ecology: Growing on the forest floor and edge of forest at 500–650 m asl.

Wider Distribution: Indonesia (Sumatera, Java, Lesser Sunda Island, Borneo, Sulawesi), Malaysia, Thailand, Vietnam, South China and the Philippines.

Uses: The culms are used as construction material, furniture, and firewood.

Specimen examined: SLY 7A Bitombang.



Figure 1. *Bambusa blumeana*: A. Habit; B. Culm sheath; C. Leaf blade.

Bambusa maculata Widjaja (Figure 2)

Synonym: *Bambusa vulgaris* Schard ex Wendl. (p.p.)

Local Name: Oro Batti, Tarri

Description: Forming dense clumps. Culm shoots green with yellow strip in sheaths. Culm erect, slightly zigzag, 6 cm in diameter near the base; internodes 25–30 cm long, green, when young green with yellow stripes in the lower ones and become green with brown to black spot when mature, glabrous, hollow; nodes prominent, the lower ones bearing aerial roots. Branches less than 1 m from the base, angled upward, 1 dominant with further branches from the node. Culm sheath up to 36 × 26 cm, caducous, covered with dark brown hairs; blade erect, 25 × 7.5 cm, remaining attached; ligule irregularly toothed; auricles wharped. Leaf blade lanceolate, 13.5 cm × 2.5 cm, green on both surfaces; ligule flat; auricles small.

Ecology: Grow in river banks at 140–150 m asl.

Wider Distribution: Java, Bali, Lesser Sunda Island, Sangihe Island.

Uses: The culms are used for furniture or as material for constructing aisle in wedding ceremony.

Specimens examined: SLY 9A Bahorea; SLY 9B Bahorea; SLY 9C Bahorea.

Bambusa vulgaris Schard. (Figure 3)

Synonyms: *Bambusa thouarsii* Kunth (1822), *B. surinamensis* Ruprecht (1839), *Leleba vulgaris* (Schard ex Wendland) Nakai (1933).

Local Name: Oro

Description: Open tufted, sympodial bamboo. Culm shoots yellow-green covered with black hairs. Culm erect and arching over, slightly zigzag, 7–8 cm in diameter; internodes 20–25 cm long,

glossy green in var. *vulgaris* or yellow with green stripes in var. *vittata* (Figure 4), glabrous; nodes prominent, the lower ones bearing aerial roots. Branches after nodes, 4–5 at each node with primary branch dominant. Culm sheath caducous, 23–25 cm × 27–37 cm, covered with appressed brown hairs, glaucous; blade erect, triangular, 10–14 cm × 6–9 cm, remaining attached; ligule slightly serrated; auricles relatively large. Leaf blade lanceolate, 22–26 cm × 3–4 cm, green, glabrous; ligule flat;

auricles small rounded lobes.

Ecology: Grows in river banks or planted as an ornamental at 140–260 m asl.

Wider Distribution: in South-East Asia it is the most commonly encountered cultivated bamboo.

Uses: local people use this bamboo for fences or as ornament.

Specimens examined: SLY 3A Lebo; SLY 3B Lebo; SLY 3C Kolokolo; SLY 5A Kolokolo

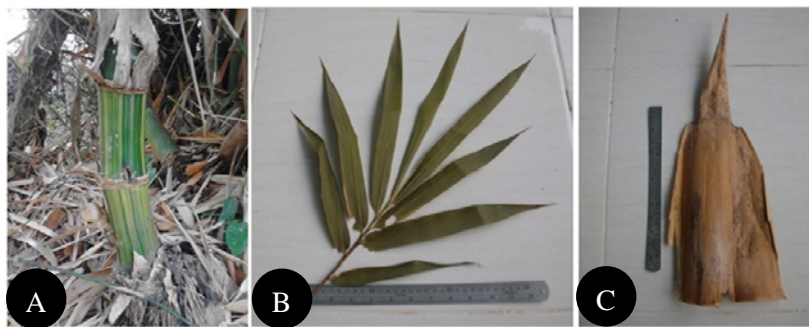


Figure 2. *Bambusa maculata*: A. Young culm; B. Leaf blade; C. Culm sheath.

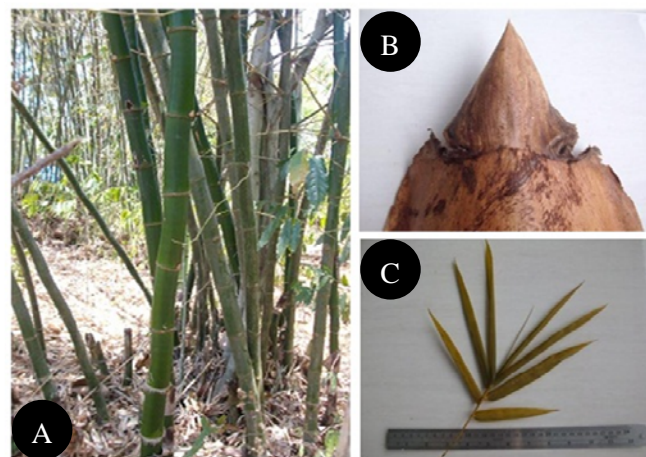


Figure 3. *Bambusa vulgaris*: A. Habit; B. Culm sheath; C. Leaf blade.

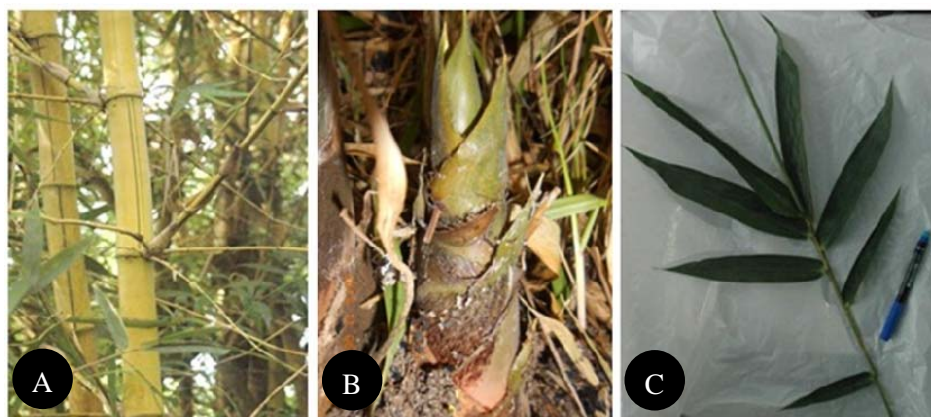


Figure 4. *Bambusa vulgaris* var. *vittata*: A. Branches; B. Culm shoot; C. Leaf blade.

***Bambusa* sp.** (Figure 5)

Local Name: Bulo Batti

Description: Forming dense clumps. Roots sticking in the surface. Culm erect, diameter 7–9 cm near the base; internodes 22–29 cm long, dark green with brown to black spot when mature, glaucous; nodes prominent. Branches arising from mid-culm, upper branches angled upward, lower reflexed, one dominant with further branches from the node. Culm sheath 28–32 cm × 17–18 cm, caducous, with brown hairs on the outer side; blade erect, about 23–38 cm × 3–5 cm; ligule toothed;

auricles rounded. Leaf blade lanceolate 32–39 cm × 5 cm, glabrous; ligule irregularly toothed; auricles small.

Ecology: Growing in river banks at 106–150 m asl.

Wider Distribution: probably an endemic species for Selayar Island.

Uses: The culm is used as material for household utensils (e.g. furniture, beds) and handicrafts (e.g. lampshades, pencil-case, and ashtray).

Specimens examined: SLY 1A Lebo; SLY 1B Lebo; SLY 1C Lebo.



Figure 5. *Bambusa* sp.: A. Habit; B. Culm sheath; C. Leaf blade.

Dendrocalamus asper (Schult.) Backer (Figure 6)

Synonyms: *Bambusa aspera* Schultes f. (1830), *Dendrocalamus flagellifer* Munro (1866), *Gigantochloa aspera* (Schultes f.) Kurz (1876), *Dendrocalamus merrillianus* (Elmer) Elmer (1915).

Local Name: Pattung

Description: Forming dense clumps. Culm shoots purplefish-black covered with black hairs. Culm erect and arching over, 11–12 cm in diameter near the base; internodes 30–40 cm long, green covered with appressed brown hairs when young, velvety, becoming glabrous with age, sometimes covered with white spotted; nodes swollen, each node covered with aerial roots. Branches arising

upper nodes only, 1 dominant with further branches from the node. Culm sheath 46–23 cm, caducous, covered with appressed brown hairs; blade reflexed, 55 × 8 cm; ligule lacerate; auricle prominent. Leaf blade lanceolate, 31 × 6 cm, rough; ligule very short; auricles absent.

Ecology: Grow in river banks and edge of forest at 106–155 m asl.

Wider Distribution: Indonesia (e.g. Sumatera, East Java, South Sulawesi, Seram, Western Papua), Malaysia (e.g. Sabah and Serawak), Madagascar, Sri Lanka.

Uses: The culm is used as building material.

Specimens examined: SLY 4A Tabang; SLY 4B Tabang; SLY 4C Tabang



Figure 6. *Dendrocalamus asper*: A. Habit; B. Culm shoot; C. Culm sheath.

Gigantochloa atter (Hassk.) Kurz (Figure 7)

Synonyms: *Bambusa thouarsii* Kunth var. *atter* Hassk. (1848), *Gigantochloa verticillata* (Willd.) Munro sensu Backer (p.p.)

Local Name: Parrang

Description: Forming dense clumps. Culm shoots purplefish-green with appressed black hairs. Culm erect, diameter 10–12 cm near the base; internodes 38–46 cm long, dark green with pale rings on the nodes, glabrous; nodes prominent with aerial roots in the lower. Branches arising from mid-culm nodes upward, with the primary one dominant. Culm sheath 28–30 cm × 28–38 cm, cadu-

cous, brown hairy on the outer side; blade about 6–7 cm × 1–3 cm, erect, remaining attached; ligule irregularly toothed; auricles rounded. Leaf blade 34–46 cm × 5–8 cm, lanceolate, glabrous; ligule flat; auricles small.

Ecology: Growing in river banks at 106–155 m asl.

Wider Distribution: Java, Sulawesi, Philippines, Malaysia, Brunei.

Uses: The culm is often used for building material or construction.

Specimens examined: SLY 2A Lebo; SLY 2B Lebo; SLY 2C Lebo.

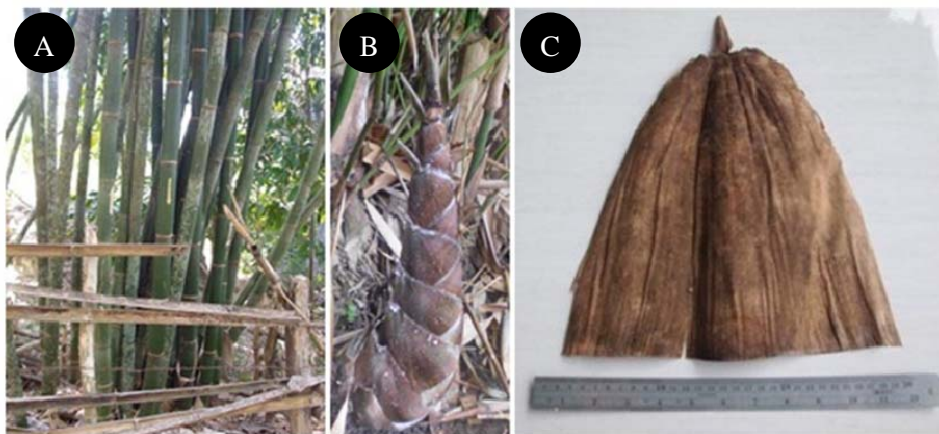


Figure 7. *Gigantochloa atter*: A. Habit; B. Culm shoot; C. Culm sheath.

Schizostachyum blumei Ness (Figure 8)

Synonyms: *Mellocana zollingeri* Steudel var. *longispiculata* Kurz ex Munro (1866), *Schizostachyum longispiculatum* (Kurz ex Munro) Kurz (1870).

Local Name: Bulu

Description: Forming dense clumps. Culm shoots green covered white or brown hairs. Culm erect and arching over, 1.6 cm in diameter; internodes 73 cm in long, sometimes only 3 long ones are found in one culm, below the nodes with white rings, dark green, glabrous; nodes not prominent.

Branches upper nodes only, angled upward, more than 5 sub-equal. Culm sheath 14×5 cm, tardily deciduous, covered with white hairs; blade reflexed, 11×0.5 cm, falling; ligule irregularly toothed; auricle incurved. Leaf blade lanceolate 36×7 cm, rough, ligule flat, auricles small.

Ecology: Grow on slope at 157 m asl.
Wider Distribution: Borneo, Sumatra, Java, Sulawesi.

Uses: The culm is used as material for rope, fishing rods, and traditional music instrument.

Specimen examined: SLY 6A Kolokolo



Figure 8. *Schizostachyum blumei*: A. Branches; B. Leaf blade; C. Culm sheath.

Schizostachyum brachycladum (Kurz) Kurz (Figure 9)

Local Name: Timallang

Description: Forming clumps. Culm shoots green, covered with brown hairs. Culm strictly erect, 19 cm in diameter. Internodes 54 cm long, light green, usually covered with white hairs when young, becoming glabrous; nodes not swollen. Branches more than five, subequal, angled upward. Culm sheath 16×28 cm, persistent, covered with brown hairs; blade 8–9 cm, erect, triangular; ligule

irregular; auricles small. Leaf blade lanceolate 32×5 cm, variegated; ligule flat; auricles small.

Ecology: Growing on forest floor at 478 m asl.

Wider Distribution: Widespread in South-East Asia.

Uses: The culm is fairly strong to be used in holding and carrying heavy weight such as a pair of bucket of water.

Specimen examined: SLY 8A Bahorea

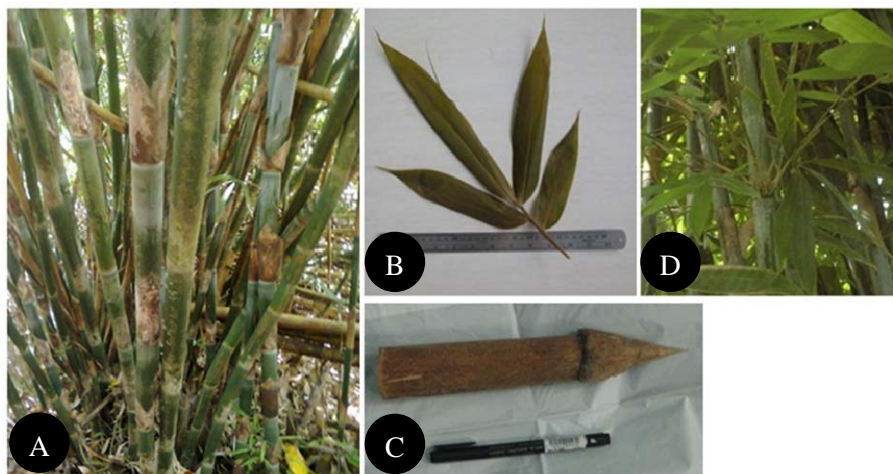


Figure 9. *Schizostachyum brachycladum*: A. Habit; B. Leaf blade; C. Culm sheath; D. Branches.

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