

## **IDENTIFIKASI JENIS KAYU PADA *BALE DAJA* BERDASARKAN STRUKTUR ANATOMI KAYU DI KABUPATEN GIANYAR, BALI**

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### **INTISARI**

Bali memiliki sistem klasifikasi kayu dalam membangun bangunan tradisional sejak zaman Majapahit, terdapat tiga konsep utama yaitu *Tri Hita Karana*, *Asta Kosala-kosali*, dan *Tri Angga*. Berdasarkan konsep tersebut, terdapat jenis kayu tertentu untuk membangun tiga komponen utama bangunan tradisional. *Bale daja* merupakan bangunan dalam kompleks rumah Bali yang dibangun lebih dulu dari yang lain dan terletak di sebelah utara. Tujuan dari penelitian ini adalah untuk mengidentifikasi kayu untuk membangun *bale daja*, dan persentase kesesuaian dengan konsep tradisional berdasarkan persepsi masyarakat.

Sampel identifikasi kayu sebagai bahan untuk membangun *bale daja* dikumpulkan di 7 kecamatan di Kabupaten Gianyar, Bali. Teknik pengambilan sampel untuk penelitian ini menggunakan *purposive random sampling* dan mengambil 34 *bale daja*. Sampel blok 1x1x1 cm dari tiga komponen utama: atap, tiang, dan pintu. Sampel diamati dengan *handheld microscope* untuk pengamatan makroskopik, mikroskop cahaya dan *Scanning Electron Microscopy* (SEM) untuk pengamatan mikroskopik. Parameter pengamatan dari IAWA ciri mikroskopik untuk identifikasi kayu daun lebar 1989.

Sepuluh spesies kayu telah teridentifikasi dan tiga diantaranya sesuai dengan kaidah tradisional yaitu *Artocarpus heterophyllus* dan *Tectona grandis* yang digunakan di atap, tiang, dan pintu, sedangkan *Sandoricum koetjape* digunakan di atap dan pintu.

Kata kunci: *asta kosala – kosali*, *bale daja*, kayu

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## Identification of Wood Species in *Bale Daja* based on Anatomical Structure in Gianyar Regency, Bali

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### ABSTRACT

Balinese has wood classification system in building their traditional building since Majapahit era and sorted into three main concepts which are *Tri Hita Karana*, *Asta Kosala-kosali*, and *Tri Angga*. Based on their concept, they use different kind of wood to build three main components of their traditional building. *Bale daja* is part of Balinese house that is built prior to others and is located in northern part of the house. The aims of this research are to identify the wood used to build *bale daja* and the suitability with the traditional concept based on the perception of the society.

Samples of identification of wood as material to build *bale daja* were collected in 7 districts in Gianyar Regency, Bali. Sampling technique for this research was purposive random sampling and taken from 34 buildings of *bale daja*. Block samples of 1x1x1 cm were taken from three main components: roof, pole, and door. Samples were observed with handheld microscope for macroscopic observation, light microscope and Scanning Electron Microscope (SEM) for microscopic observation. The anatomical structures were observed from IAWA list of microscopic features for hardwood identification 1989.

Ten species of wood have been identified and three of them are used in the traditional concept: *Artocarpus heterophyllus* and *Tectona grandis* have been used on the roof, pillars, and doors, meanwhile *Sandoricum koetjape* has been used on the roof, and doors.

Keywords: *asta kosala – kosali*, *bale daja*, wood

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