

# WOOD ANATOMY OF LINGGUA (*Pterocarpus indicus* Willd.) FROM PAPUA

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## Introduction

*Pterocarpus indicus* Willd. or linggua (Fam. Leguminosae) economically is the major species for timber in Indonesia. Lingua The wood is an excellent hardwood species for fine furniture, cabinetry, cart wheels, carving, veneers, musical instruments etc. whose due to its attractive

## Material and Method

Linggua wood is obtained from Sarmi, Papua. Wood anatomy was observed by light microscope Zeiss Axio Imager A1m as well as SEM Zeiss EVO 50 on wood sectioning 15-25  $\mu\text{m}$  and wood block.

## Conclusion Remarks

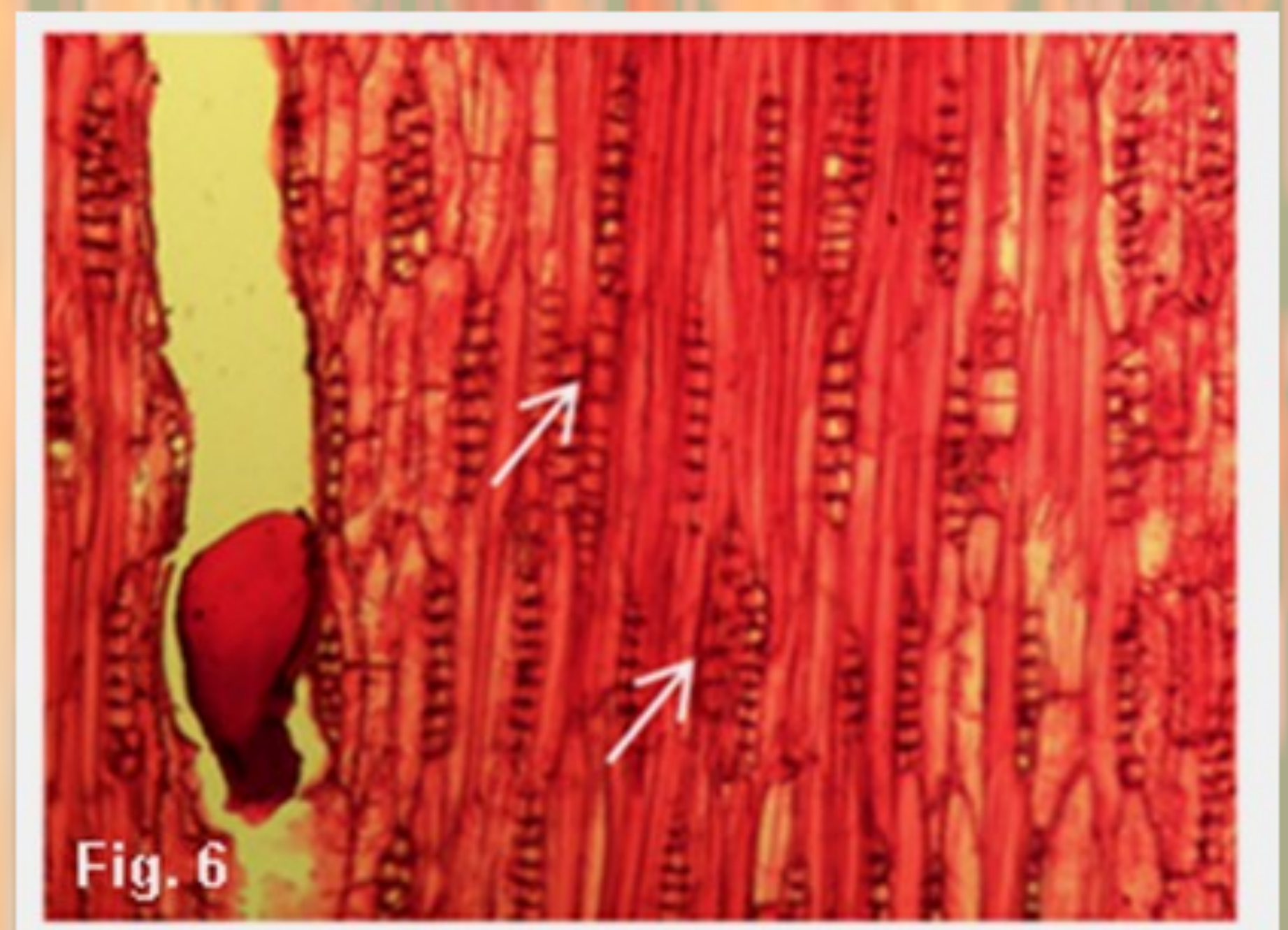
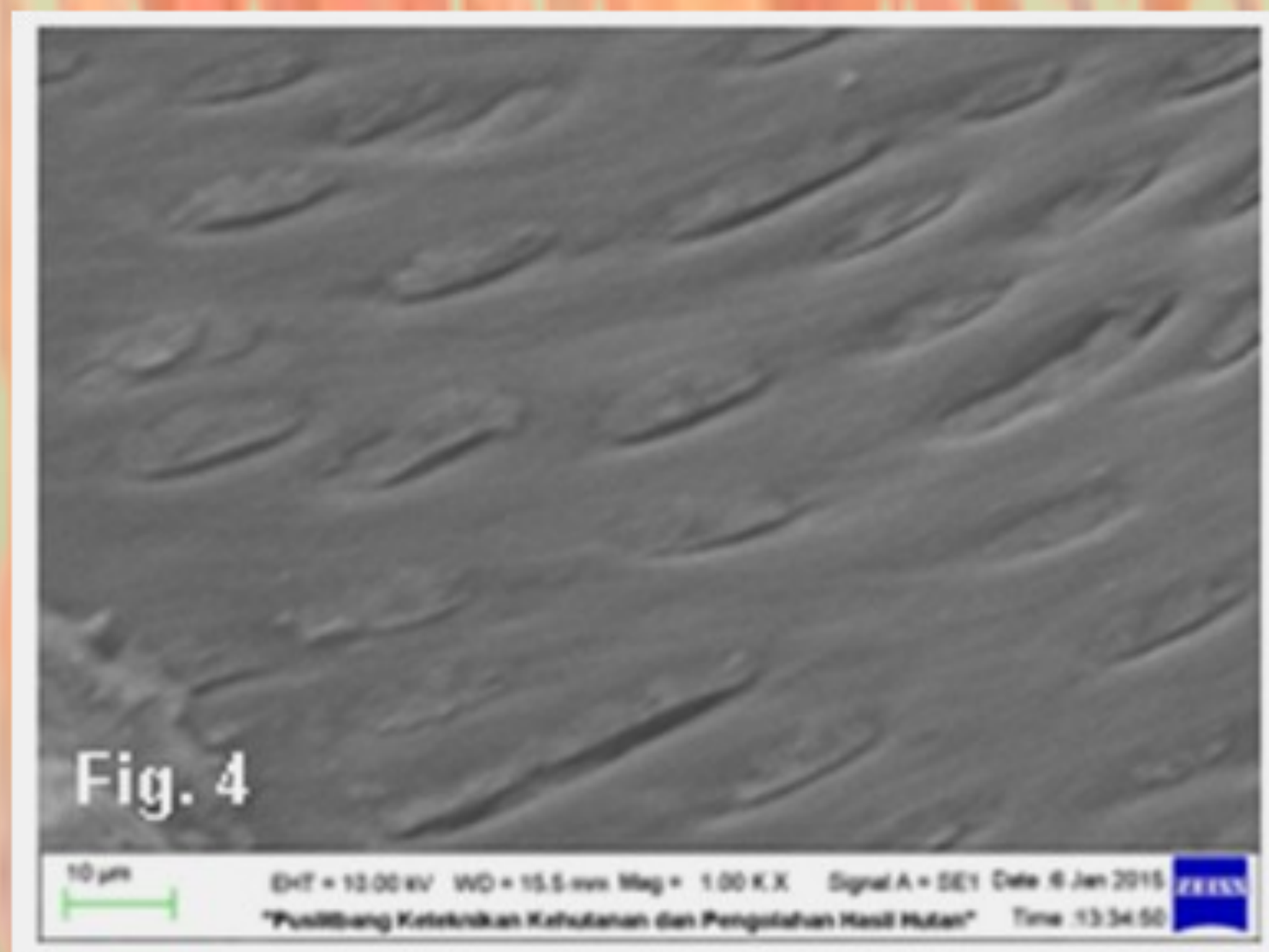
### Macroscopic characters:

Heartwood can vary widely in color, ranging from light yellow to reddish-brown. Pale yellow sapwood is clearly demarcated from the heartwood. Grain wavy or interlocked. Texture moderately fine to moderately coarse; ribbon figure present in material with wavy grain (Fig. 1). Linggua timber is moderately hard and has no specific odor.

Growth rings distinct, formed by concentric alignment of large pore rings and by a layer of darker coloured wood at the end of the ring; vessel visible to the naked eye, particularly distinct at the base of the large pore rings, solitary and in radial multiples of 2-4 cells, tyloses occasionally present (Fig. 1); axial parenchyma aliform, in concentric confluent layers and terminal, confluent parenchyma irregularly and closely spaced and wavy; rays barely visible to the naked eye on the tangential surface because of the storied arrangement (ripple marks).

### Microscopic characters:

Growth rings distinct, marked by concentric alignment of large pore rings. Vessel very few to few, mostly soliter, very small in latewood to very large in the earlywood (Fig. 2); perforation plates simple; intervessel pits alternate, small, vertured (Fig 3 and 4); tyloses occasionally present; vessel-ray pits similar to intervessel pits pittings. Fibres predominantly medium sized to moderately long, non septate, thin-walled, with numerous simple pits with slit-like apertures in the radial walls. Axial parenchyma abundant, aliform-confluent and terminal, strand usually 2-celled or parenchyma fusiform (Fig 5). Rays 1(-2) -series, 2-12 cells high, mostly 5-9 cells wide, homocellular and composed of procumbent cells. Rhomboidal crystals



## Reference

IAWA. 2008. Identifikasi Kayu: Ciri Mikroskopik untuk Identifikasi Kayu Daun Lebar. Badan Penelitian dan Kehutanan. Pusat Penelitian dan Pengembangan Hasil Hutan Bogor.