

Pollen and fern spores recorded in recent and late Holocene marine sediments from the Java Sea and SE Indian Ocean



Introduction

Fossil pollen and spore diversity in marine sediment cores from the coasts off SW Kalimantan and NE Java (Java Sea; Fig. 1) and modern pollen assemblages collected off West Java in the SE Indian Ocean in a marine sediment trap are documented in this work. In total, photographic images of 138 pollen and 41 spores including 14 pollen and 32 unidentified spore types are presented in morphological order.

Two sites chosen for comparison:

heavily populated Java with its long history of the human activity
less densely populated South Kalimantan still barring natural vegetation

Study Area

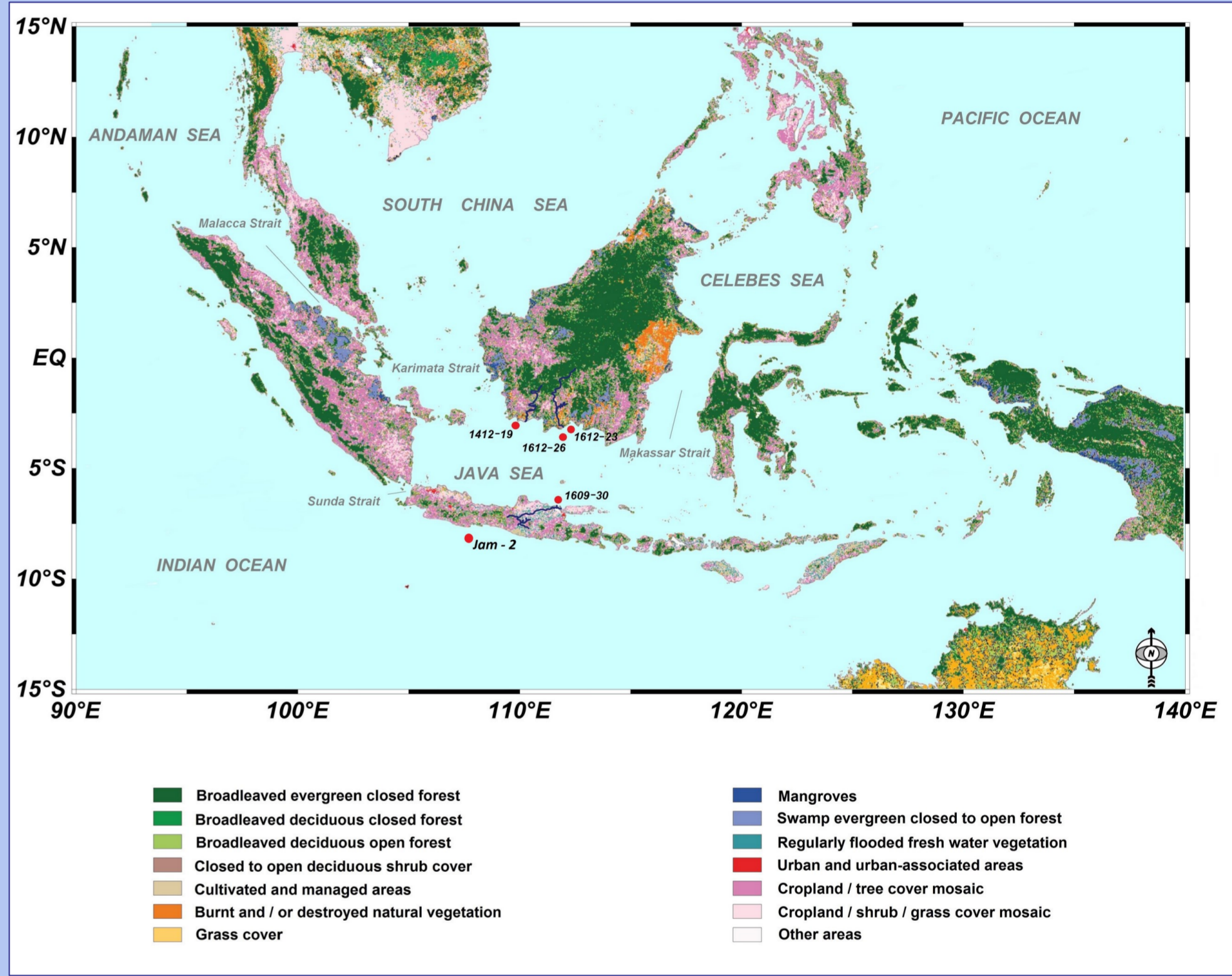


Fig. 1. Schematic map of the study area with distribution patterns of main vegetation types. Marine sediment cores and a sediment trap are shown with red dots. Data on the vegetation distribution is derived from OSGeo website (<http://geonetwork-opensource.org>) and partly from Stibig et al. (2002).

Pollen and Spore Database

Collection of Indonesian fossil and modern pollen photos of the Department of Palynology and Climate Dynamics is being developed recently and is available at the Albrecht-von-Haller-Institute for Plant Sciences, the University of Göttingen, Germany.

All photos presented in this atlas will be soon accessible online with an option to comment and request.

URL:<http://www.gdvh.uni-goettingen.de/>.



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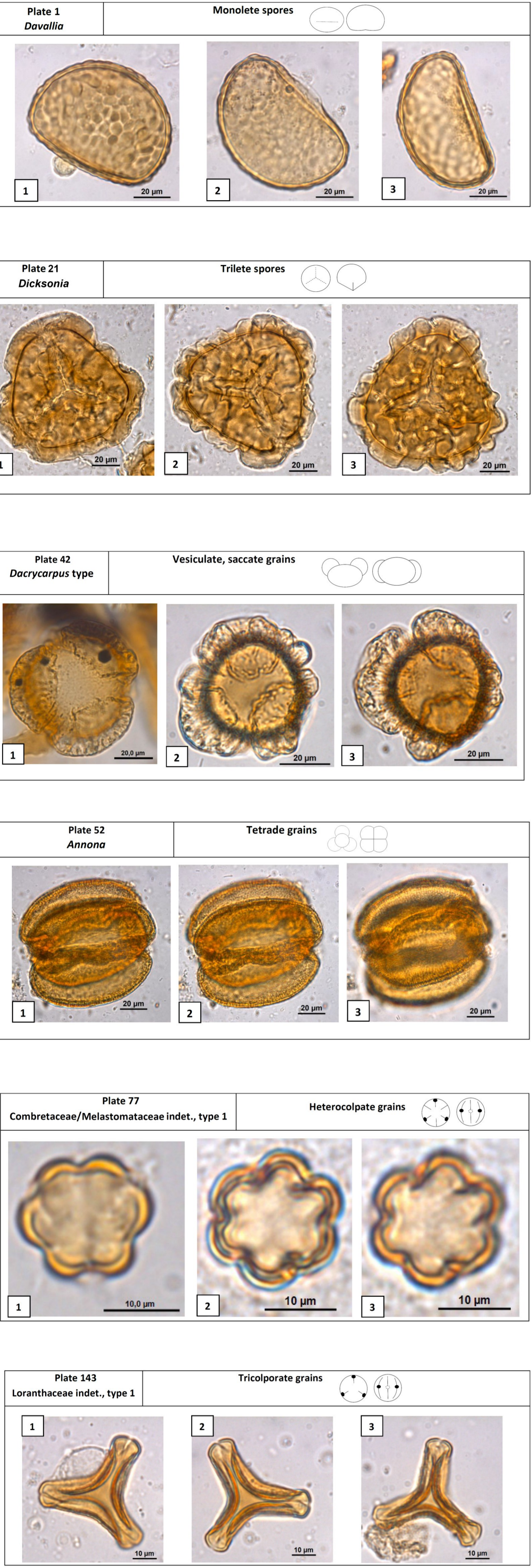


Fig. 3. Examples of pollen and spore plates:

Plate 1. Monolete spores. Davallia. 1-3 – View at different focus.
Plate 21. Trilete spores. Disconia. 1, 2 – Polar view; 3 – Polar view with high focus on the surface pattern.
Plate 42. Vesiculate, saccate grains. Dacrycarpus type. 1 – Polar view, proximal side; 2 – Polar view; 3 – Polar view, distal side.
Plate 52. Tetrade grains. Annona. 1, 2 – Equatorial view with different focus; 3 – Equatorial view with a high focus on the surface pattern.
Plate 77. Heterocolpate grains. Combretaceae/Melastomataceae indet., type 1. 1-3 – Polar view with different focus.
Plate 143. Tricolporate grains. Loranthaceae indet., type 1. 1-3 – Polar view with different focus.

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