

Principes, 38(3), 1994, pp. 157-160

Palms in Stone

WULF KILLMANN AND JOHN DRANSFIELD

Forest Research Institute Malaysia, Kepong, 52109 Kuala Lumpur, Malaysia and Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey, TW9 3AE, UK

In about the second century A.D., parts of Java, Sumatra, Malaysia, and Indochina fell under the influence of India (Coedes 1971). A number of large empires emerged, such as Majapahit in Java, Srivijaya in Sumatra, the Cham Empire around Da Nang in Vietnam, and the Khmer Empire in Cambodia. The most spectacular remains of the empires of that period are temple complexes, the two most renowned being Borobodur near Jogjakarta in Central Java and Angkor, east of Tonle Sap in Cambodia. Not only are these two temple complexes stunningly beautiful, but in their rich carvings depicting scenes of the life of Buddha or of Hindu gods and of everyday life at that time, they provide a window into a vanished world.

Between 880 and 1200, each Khmer king built his own temple, both as a place of worship for himself and as his later tomb. Between 1181 and 1201 A.D. the great ruler Jayavarman VII built the fortified city of Angkor Thom on the site of former temples (Coedes 1984). The city, covering some 10 square kilometers, was encircled by a moat. In the very center of the city he built the major temple, Bayon. The outer wall of the first level on this square, multilevelled building is decorated with a 1,200 meter long bas-relief depicting the various wars between the Khmers of those days and their neighbors, particularly the two wars with the Cham from the east. During the 1170s the Cham sacked Angkor Wat, and subsequently the new powerful king Jayarvarman VII routed them in turn. Among the scenes of war are more idyllic scenes of everyday life. In these scenes, three palms are easily recognized, the coconut

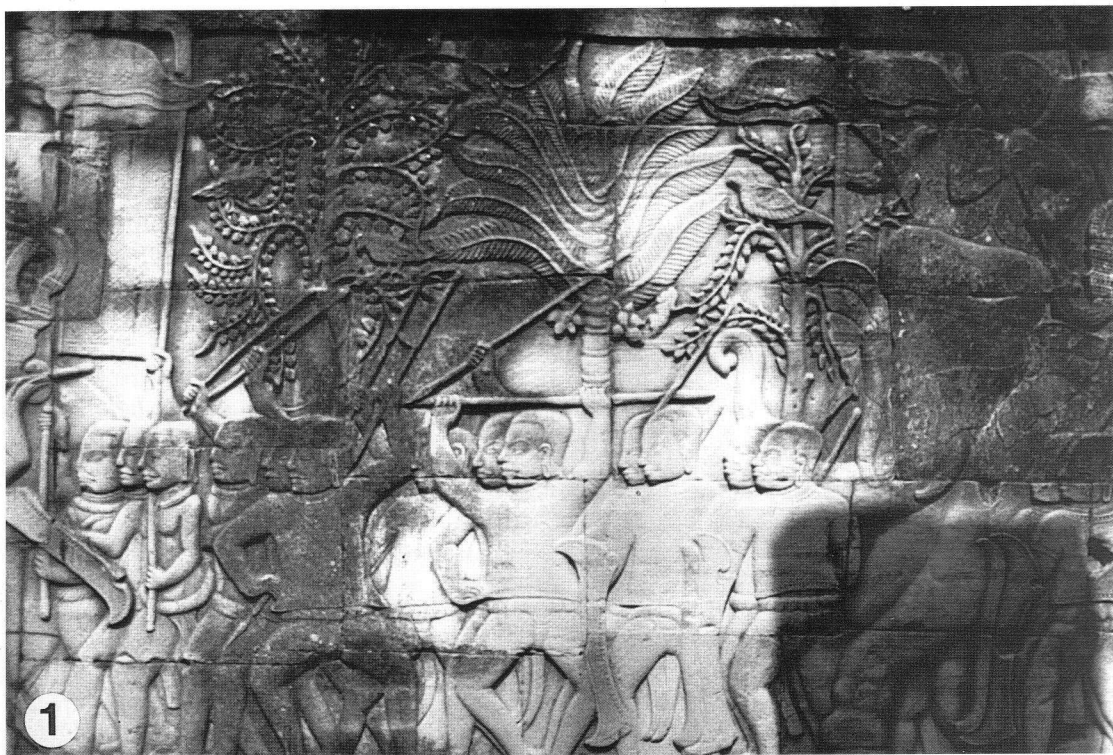
(*Cocos nucifera*), the palmyra (*Borassus flabellifer*), and the wild date (*Phoenix sylvestris*). Of these, the last was probably brought into the area by members of the Indian ruling class, while *Borassus flabellifer* can still be seen in abundance in the landscape surrounding the temple complex.

Construction of the great Buddhist Temple of Borobodur in Central Java is thought to have begun in about 775 A.D., with at least four main phases of development over the next 75 years (Dumarçay 1978). Constructed on a mound, the temple consists of a series of seven square terraces crowned by three circular terraces topped by a massive stupa. The walls of the square terraces form a stupendous art gallery in stone, the bas-reliefs depicting scenes of the life of Buddha. Amongst the human and animal figures can be seen palms. Sugar palms (*Arenga pinnata*), coconut (*Areca catechu*), and palmyra can all be distinguished if one uses a little imagination (Figs. 1-6).

These bas-reliefs in the Khmer Republic and in Java testify to the importance that palms have played in the everyday life of southeast Asia over the centuries.

LITERATURE CITED

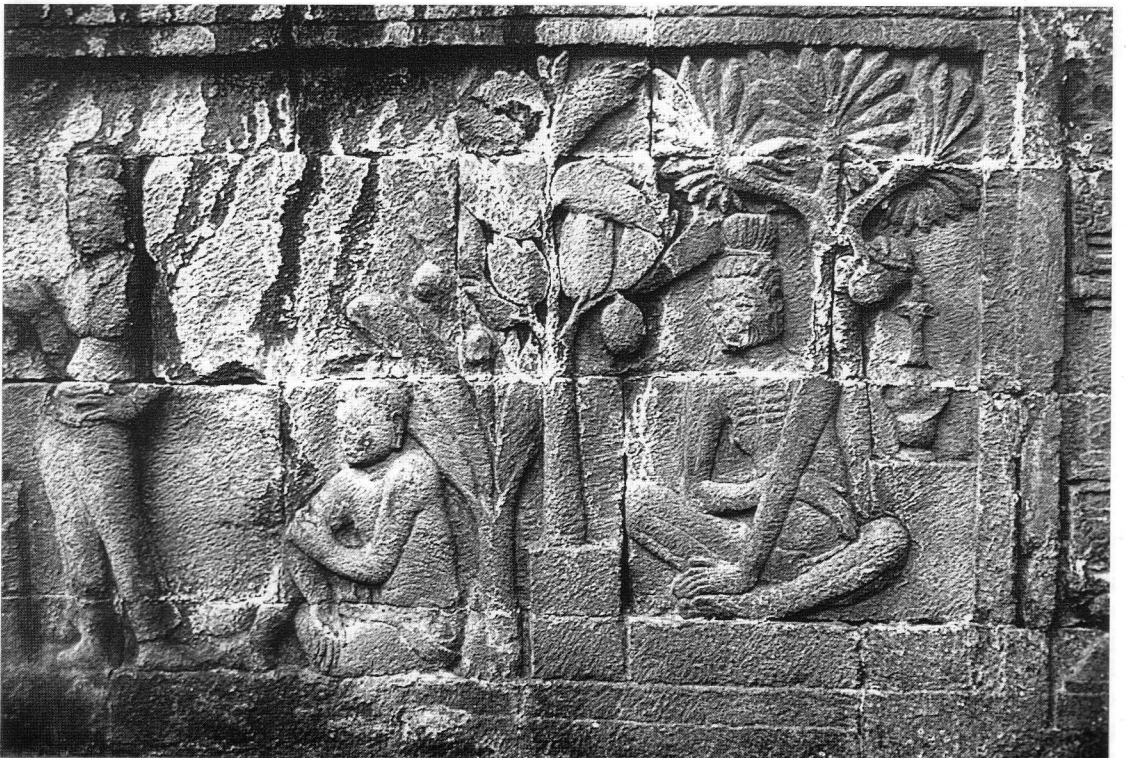
- COEDES, G. 1971. The Indianized states of Southeast Asia. Translated by S. B. Cowing. East-West Centre, Honolulu.
 ———. 1984. Angkor. Translated by E. F. Gardiner. Oxford in Asia Paperback, Oxford University Press, Singapore.
 DUMARÇAY, J. 1978. Borobodur. Oxford University Press, Kuala Lumpur, 72 pp.



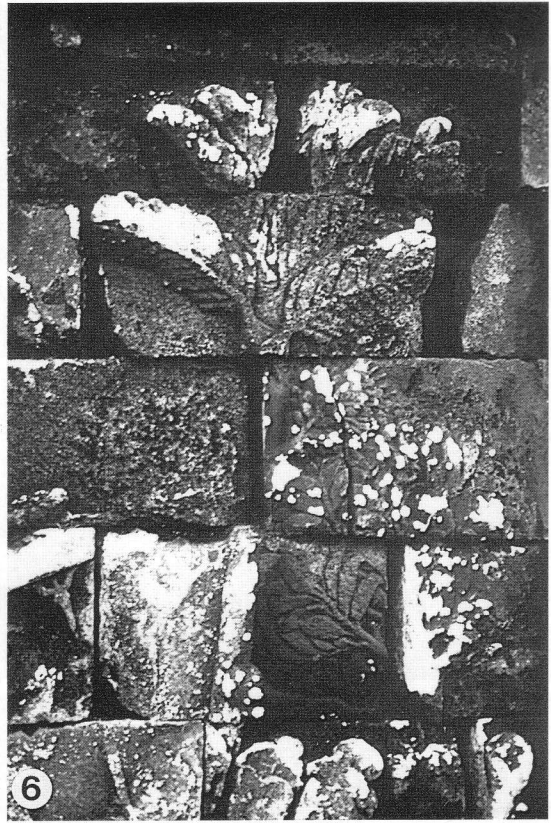
1. Angkor Wat. Cham warriors marching to the front. Amongst the trees in the background is a coconut palm, the number of umbrellas to the right is an indication of the rank of the officer riding the elephant. 2. Angkor Wat. Thai troops (allies of the Khmer) on their way to the front; in the center is a mature *Borassus flabellifer*.



3. Angkor Wat. Peace talks between subdued Cham (to the left) and Khmer officials; one can see banana plants on the left and a young *Borassus flabellifer* on the right.



4. Borobodur. A fruiting *Borassus flabellifer* can be seen on the right, a breadfruit tree and banana plant in center.



5. Angkor Wat. Warriors on the march; in the background is an Indian date palm. Note the rodents on the trunk trying to get at the fruit. 6. Borobudur. A betel palm, *Areca catechu*.

Principes, 38(3), 1994, pp. 160-161

PALM LITERATURE

A GUIDE TO PALMS AND CYCADS OF THE WORLD.
By Lynette Stewart. x + 246 pp. illus. Angus
& Robertson, Sydney, Australia. 1994. ISBN
0-2071764-3-4. Price: unknown.

A Guide to Palms and Cycads of the World "shows you how to identify and cultivate an astonishingly diverse array of these ancient and fascinating plants"—or so the message on the dust jacket tells us. This new addition to the ever increasing number of popular books on palms and cycads is an attractive publication, filled with color photographs. Many members of the Society will wish to purchase it on sight—the cover photographs of *Cyrtostachys renda* on the front and

Cycas pruinosa on the back are pretty compelling. The book will probably sell like hot cakes, and this says much for its attractive design and often excellent photographs. The photographs and beautiful lay-out will attract readers, who may go on to be enthused about palms and cycads. A closer look at the book, however, made me begin to question just how useful it really is for identification. In the following review, I shall discuss the palm component of the book only.

Lynette Stewart has gone to considerable pains to make sure that the nomenclature in her book reflects current thinking on palm genera, and she has done this, for the most part, very successfully. She has also given conservation ratings for all the species she discusses, an admirable innovation for such a popular book. The species descriptions are