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Earlier accounts of driftwood of *Alstonia spatulata* (Apocynaceae)

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ABSTRACT. We report on records from the 1930s by R. Kanehira of the ultralight driftwood from root- and basalmost stemwood of *Alstonia spatulata* Blume which were overlooked in Baas et al. (2019).

Keywords. Apocynaceae, Caroline Islands, Indomalesia, Marshall Islands, Micronesia, Palau Islands, Philippines, rootwood, swamp forest, trunkwood

Review of early records

The detailed account of the ultralight driftwood and basalmost stemwood and rootwood of *Alstonia spatulata* Blume published by Baas et al. (2019) has elicited numerous reactions in the wood anatomical community and future research is foreseen on the ultrastructure of the extremely thin walls of the modified fibres which constitute the ground tissue of this wood (Fujii & Baas, in preparation).

One of us (TF) found that identical driftwood had been recorded and described much earlier by Record (1932), Kanehira (1933) and Kanehira et al. (1933). The spectacularly light wood, which was first brought to the attention of Kanehira by an entomologist in 1929, also attracted the attention of Kanehira's international wood anatomical and botanical network of the time (S.J. Record of Yale University, L.J. Reyes of the Philippine Bureau of Forestry, F.B.H. Brown from the Bishop Museum, Honolulu, and the staff (probably K. Heyne) of the Forestry Experimental Station (Boschbouwproefstation) in Bogor (Buitenzorg), Java, as well as daily newspapers such as the *Manila Daily Bulletin* on 3 October 1931 and *The New York Times* on 13 December 1931).

Here we briefly abstract these important earlier records and descriptions, mostly published in Japanese and overlooked in Baas et al. (2019).

Kanehira (1933) and Kanehira et al. (1933) reported a number of additional localities of the driftwood records from Micronesia and Indomalesia: the Caroline Islands, Palau Islands, the Philippines (Luzon), Java and Sumatra. Unexpected uses were also reported, such as being made into cushions for entomologists to pin insects onto, and the suggestion in a letter by F.B.H. Brown that "the Chinese line their coats with the shavings of the driftwood, which act as a non-conductor of heat (like feathers) – but this information may be wrong" make Kanehira's and Record's papers entertaining

to read. Kanehira (1933) concurred with Brown's suggestion (in correspondence) that the identity of the driftwood must be *Alstonia spatulata* (although using the incorrect spelling *spathulata*). His account of the properties of the driftwood is very accurate and fully in agreement with the account in Vander Velde & Vander Velde (2006) and Baas et al. (2019). He appreciated the gradual differences between rootwood, basalmost stemwood and trunkwood and gave a detailed and well illustrated wood anatomical account. Part of Kanehira's driftwood samples received through various contacts is preserved in the xylarium of the Forestry and Forest Products Research Institute in Tsukuba Japan (TWTw) and permanent sections were cut later of one of the samples, showing identical wood structure to the driftwood of the Marshall Islands and the basalmost wood of the vouchered young tree from the nursery in Singapore (Baas et al., 2019).

Discussion

The driftwood from the Marshall Islands reported by Vander Velde & Vander Velde (2006) and Baas et al. (2019) appears to have a much wider distribution in Micronesia and Indomalesia. Reports in the early 1930s were accompanied by publicity in American and Philippine newspapers, because the ultralight driftwood, much lighter than Balsa wood, was considered to be a promising material for insulation and superior to Balsa, a timber that was gaining popularity at the time, e.g. in the aeroplane industry. The great commercial promise was, however, not realised– perhaps because the development of synthetic products like expanded polystyrene foams or styrofoam in the 1940s made natural products derived from a small Malesian swamp forest tree redundant.

Ironically, the identification of the driftwood in the 1930s was done without resorting to freshly collected, well-vouchered specimens. Baas et al. (2019) initially could also base their identification only on comparisons with commercial samples. Confirmation of the identification with vouchered botanical material from a nursery in Singapore was crucial. For future studies on the biomechanical conundrum of *A. spatulata* new collections and field observations in the swamp forest remain a necessity.

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