

NOTES

CHROMOSOME NUMBERS OF *OLDENLANDIA CORYMBOSA* (RUBIACEAE) FROM SOUTHEASTERN ASIA¹

Although few tropical species have been studied cytogeographically over a wide distribution, the weedy rubiaceous annual *Oldenlandia corymbosa* L. is an exception. The species occurs from southern United States to central South America, Africa, southern Asia including the Malayan Archipelago to New Britain and Queensland. Lewis (Grana Palynol. **5**: 300-341, 1964) summarized the known chromosome numbers of plants from four continents in which three cytotypes (2x, 4x, 6x) based on $x = 9$ were found. The diploid race was reported in the New World, the tetraploid in India and all three races in Africa, viz. the 2x common in western Africa, the 4x widespread in eastern and central Africa and rare in the western region and the 6x race from one locality in coastal western Africa. Recently the presence of the diploid race in Brazil was confirmed (Lewis, Ann. Missouri Bot. Gard. **53**: 102, 1966) as well as the hexaploid race in coastal Sierra Leone (Harvey, Taxon **15**: 162, 1966).

Even though the area studied in 1964 was extensive, it did not nearly include the whole range of *O. corymbosa* and in particular a large gap in chromosomal data existed for southeastern Asia and adjacent areas. However, I found that diploidy vs. polyploidy was directly related to size, exine thickness and aperture number of the pollen and that from herbarium material alone the ploidy level of plants could be judged. On this basis additional regions were assessed for presumed chromosome numbers to the limit of available herbarium specimens. In southeastern Asia, for example, a large disjunct diploid race was postulated even though supporting data from actual chromosome counts were lacking; elsewhere, the pollen data extended somewhat the known limits of races already established on chromosome numbers.

Early in 1966 I received a generous collection of seeds from Mr. S. R. J. White then traveling through Indonesia to Singapore. This material from five localities has now flowered at the Missouri Botanical Garden and verifies the existence of the diploid race in that area.

Oldenlandia corymbosa L.: $n = 9$. INDONESIA. JAVA: Bandung, Lewis 6702 (MO), 1 plant, 42 km N of Jogjakarta, Lewis 6699 (MO), 1 plant; TIMOR: Atambua, Lewis 6703 (MO), 2 plants. SINGAPORE. Lewis 6695 (MO), 1 plant, Lewis 6696 (MO), 2 plants. All voucher specimens are from greenhouse grown plants.

Not only do the counts for *O. corymbosa* emphasize the usefulness and reliability of pollen data in distinguishing diploids and polyploids and extending, positively the known range of the 2x cytotype from Brazil and Texas through Africa to eastern Indonesia, but they further illustrate an example in the tropics of incipient speciation which can be initiated and enhanced by macrochromosomal muta-

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ANN. MISSOURI BOT. GARD. **53**(2): 257-264, 1966.



Lewis, Walter H. 1966. "Chromosome Numbers of *Oldenlandia corymbosa* (Rubiaceae) from Southeastern Asia." *Annals of the Missouri Botanical Garden* 53, 257–258. <https://doi.org/10.2307/2394945>.

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