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LITERATURE CITED


—Robert N. Bowman, Department of Botany and Plant Pathology, Colorado State University, Fort Collins, Colorado 80523 and Peter C. Hoch, Missouri Botanical Garden, Post Office Box 299, St. Louis, Missouri 63166.

CHROMOSOME NUMBER IN TWO PRIMITIVE DICOTS,
Xymalos monospora (MONIMIACEAE) AND
Piptocalyx moorei (TRIMENIACEAE)

Xymalos monospora (Harvey) Baill. 2n = 40-42. Zimbabwe-Rhodesia, Bunga Forest, Umtali distr., Müller s.n. (13 Aug. 1978) (SRGH).

Chromosomes of Xymalos are small in size, ranging from 1.5-2.5 μm and comparable in appearance to those of other Monimiaceae studied by Goldblatt (1974). Small size and high number made an accurate count for Xymalos difficult, especially as the material available was very limited.

Piptocalyx moorei Oliver ex. Benth. 2n = 16. Australia, New South Wales, North Coast, Floyd 1104 (NSW).

The chromosomes of Piptocalyx are substantially larger than those of Xymalos and range from 3-4.5 μm in size. Details of chromosome morphology are clearly visible and are illustrated in Fig. 1.

Xymalos is a monotypic genus of eastern south-tropical Africa, usually assigned to Monimiaceae s.l. The only other African genus is the tropical West African Glossocalyx, one of three genera of Monimiaceae-Siparunoideae (sometimes segregated as Siparunaceae); however, Monimiaceae-Monimioideae are well represented on the offshore African islands of Madagascar and the Mascarenes. An alternative systematic position for Xymalos was proposed by Hutchinson (1964) who placed the genus in the otherwise Pacific family Trimeniaceae. This treatment is not generally accepted (Schodde, 1970; Thorne, 1974) but was followed by Dyer (1975) in his revised generic flora of southern Africa.

There are strong cytological differences between Monimiaceae and Trimeniaceae, the former having base numbers at a palaeohexaploid level, x = 22-19. Base numbers for Monimiaceae s.s. (excluding Siparunaceae, x = 22, and Atherospermataceae, x = 22) are mostly x = 19 with counts also for n = 22 and n = 18 in two genera (Ehrendorfer et al., 1968; Goldblatt, 1974), while Trimeniaceae

are evidently palaeodiploid, the only previous count being a report of \( n = 8 \) in *Trimenia papuana* (Goldblatt, 1974). Differences in base number are accompanied by strong size differences in the chromosomes.

The present note substantiates the cytological differences between these two families, with the report of \( n = 8 \) in the monotypic *Piptocalyx*, the only other genus of Trimeniaceae, confirming the initial observations on the cytology of the family. Cytological data provide convincing supportive evidence that *Xymalos* does not belong to Trimeniaceae, and it seems well placed in the Monimiaceae alliance.

Due to the cytological difficulties in the available material of *Xymalos*, a more accurate count proved impossible. We are thus unable at present to say whether chromosome number indicates close affinity to Monimiaceae s.s. (\( x = 19 \)) or to Siparunaceae or Atherospermataceae (both \( x = 22 \)). Morphology, however, does not indicate any affinity of *Xymalos* to the latter two families.

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**Literature Cited**


