

PTERIDOPHYTA—ADIANTACEAE

A NEW CYTOTYPE FOR *ACROSTICHUM AUREUM*

Acrostichum is a genus with a pantropical distribution and consists of three, or perhaps more, species. *A. aureum* L. is the most widespread of these and also has a pantropical distribution.

On the west coast of Africa *A. aureum* occurs from Guinea-Bissau to northern Angola and on the east coast from Zanzibar to the Transkei. *A. aureum* is largely an estuarine species which is commonly associated with the upper edge of mangrove communities. It generally grows in brackish or saline flats of alluvial mud or muddy sands. Although it is predominantly an estuarine species it occurs sporadically at considerable distances from the coast. In Zimbabwe it was found at an elevation of approximately 500 m at a hot spring with salt efflorescences (Jacobsen 1983). Plants have also been recorded 100 km from the coast in Saudi Arabia, 823 m above sea level, where it grows in a slightly saline alkaline seepage (Collenette 1991).

Cytological observations in *A. aureum* have been carried out on plants from Sri Lanka (Manton & Sledge 1954), Ghana (Manton 1959), southern India (Abraham *et al.* 1962) and Jamaica (Walker 1966). In all events the chromosome number reported was $2n = 60$.

A collection of *A. aureum* made by me, Roux 1945 (NBG), in a seasonally marshy area on the banks of the St Lucia Estuary, on the northern Natal coast, have now been studied cytologically. Acetocarmine preparations of root tips taken from this cultivated plant revealed a chromosome number of $2n = 120$ (Figure 8). This plant may therefore be considered a tetraploid. The suggestion made by Tryon & Tryon (1982) that polyploidy, which is a common phenomenon in tropical pteridophytes, never developed in the genus, can therefore no longer be upheld. Most chromosomes are of the acrocentric and telocentric type with few being submetacentric.

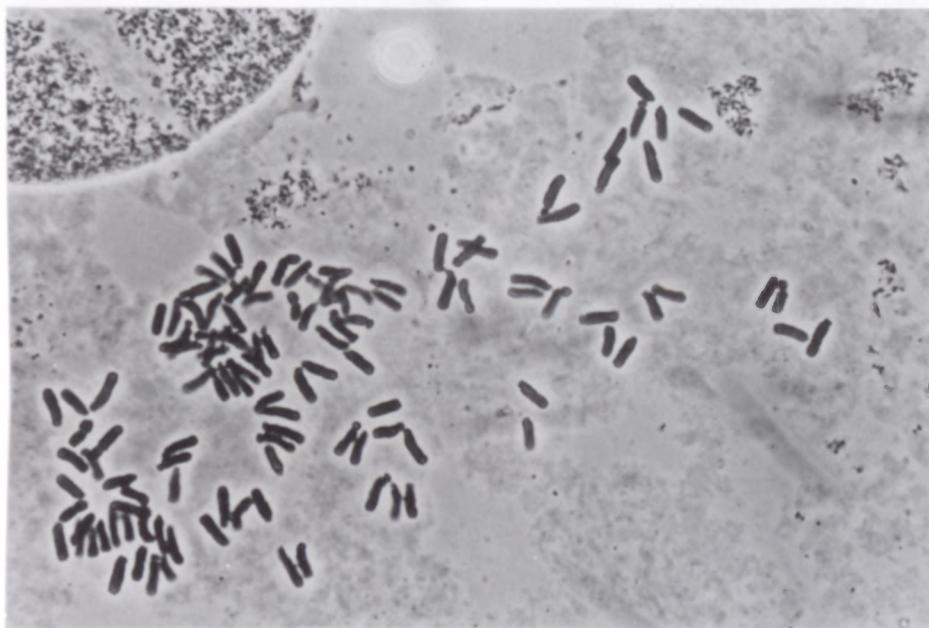


FIGURE 8.—Root tip mitosis of *Acrostichum aureum* showing 120 chromosomes, Roux 1945 (NBG).

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FIGURE 9.—*Argyrolobium rotundifolium*, Edwards & Ackermann 329 (NU). A, habit; B, leaf; C, fruit; D, standard, frontal view; E, keel; F, wing; G, calyx; H, androecium. Scale bars: A = 10 mm; B = 5 mm; C = 4 mm; D–F, H = 2 mm; G = 4 mm.