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MANUAL
of the
LEAFY HEPATICAE OF LATIN AMERICA
PART IV

by

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*The plants which are as yet unknown make the natural
method incomplete; knowledge about them will bring it to
perfection, because in fact nature makes no jumps.*

Linnaeus

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¹ The other genera of this family will be described in Part V.

MONOGRAPHIC STUDIES IN CASSIA
(LEGUMINOSAE-CAESALPINIOIDEAE)

I. SECTION XEROCALYX¹

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The New York Botanical Garden

INTRODUCTION

In the preliminary remarks to his classic revision of the genus *Cassia*, Bentham (1871) states, "The section *Chamaecrista* is an exceedingly puzzling one to botanists. The nicest shades by which the majority of forms pass into each other make it impossible to settle what is to be regarded as a species with any satisfaction." This statement is perhaps more applicable to Bentham's subsection *Xerocalyx* than to any other species group within the section *Chamaecrista*. Amshoff (1939) points out that in *Xerocalyx* certain characters, e.g. leaflet form and size, pedicel length, petal size, and gland stipitation, appear to be independently variable, especially when one examines specimens taken from over a wide area.

The present paper is an attempt to introduce some order into this species complex. The overall problem has taken two phases. The first has been a determination of characters, biochemical, chromosomal, and anatomical, as well as morphological, common to all taxa within *Xerocalyx*, and the comparison of them with comparable traits in other sections of *Cassia*. It is felt that, when taken as a whole, the characters of the group are so distinctive and reflective of such naturalness that failure to recognize *Xerocalyx* as a section would be inconsistent with the present widely accepted infrageneric organization of the genus. The second phase has been an assessment of the specific and varietal taxa in light of the more adequate material now available, and adjustment of entities where appropriate. Judgments have been based on examination of some 2500 herbarium specimens and experience gained in over 10 years of field work in tropical South America. In the present treatment, the section *Xerocalyx* embodies 31 taxa; 16 species and 15 varieties are recognized.

Nonetheless this undertaking must be regarded as preliminary. Great areas in Central and South America are still little explored botanically and there remain enormous tracts which are yet to be visited. This has complicated not only the appraisal of morphological variability but also the determination of geographical distribution. Speculations regarding the latter are difficult to make owing to the paucity of published information on South American geology. Since the present author will be engaging in botanical exploration in tropical South America in

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