

ABSTRACT

Part I of this thesis gives a brief survey of the family Capparaceae. This survey deals with the phytochemical investigations of various species within the genera *Cleome* and *Capparis*. A discourse on the phylogenetic relationships between Capparaceae and other families is also included.

In Part II, the isolation and identification of the compounds extracted from the leaves and twigs of the plants *Capparis flexuosa* and *C. feruginea* are discussed. The major part of the discussion deals with the structure elucidation of taraxerol, a pentacyclic triterpenoid from *C. flexuosa*.

Part III describes the phytochemical investigations of *Parinari campestris*, a member of the Rosaceae family, which is known to have medicinal properties.