

Abstract

Plants of the genus *Bergenia* are part of remedies used in Ayurveda medicine. They also play an important part in traditional healing practice in China, India, Mongolia and Russia.

Theoretical part of this thesis sums the newest findings and research results concerning three *Bergenia* species: *Bergenia ciliata* (Haw.) Sternb., *Bergenia crassifolia* (L.) Fritsch a *Bergenia ornata* Stein. The thesis mainly focuses on their current and potential use in medicine and pharmacy. *Bergenia* extract is traditionally used for dissolving kidney stones, treating respiratory tract illnesses and to stop bleeding.

The most important active substances of these plants, their characteristics and main effects are also noted. *Bergenia* is an important source of arbutin and bergenin. Bergenin has antitussive, antiflogistic and gastroprotective effects. Arbutin is used to treat urinary tract diseases and in cosmetology to lighten the skin.

The experimental part of this thesis includes methods of preparation of permanent microscope slides from leaves of chosen *Bergenia* species. Photographs have been taken from both permanent and native slides. Anatomy of the leaf and leaf epidermis is described including stomatal index. Presence of calcium oxalate crystals in form of druses is also documented. Basic anatomical features were described and evaluated, with the possibility of finding identifying characteristics in mind.