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Research Title : *Morphological And Comparative Anatomical Studies On Some Species Of Acacia (Fabaceae) Growing In Wadi Fatma In Makkah Al-Mukaramah Region*
دراسات مورفولوجية وتشريحية مقارنة لبعض أنواع الأكاشيا (الفصيلة البقولية) النامية في وادي فاطمة بمنطقة مكة المكرمة

Descriptipn : The genus *Acacia* L. is a member of the subfamily of *Mimosoideae* (*Fabaceae*). The genus includes between 1100- 1300 species, widespread in the tropical, subtropical and the arid regions of the world. About eighteen species are growing in the western and southwestern regions of Saudi Arabia, which are distributed through the plant communities or as communities of *Acacias* in Al-Sarawat high mountains or in the wadies valley and plains. *Acacia* species resemble morphologically, that the confusion on their identification can be drawn. Wadi Fatma is one of the main wadies in Tihama plain of Saudi Arabia. This wadi is well known by the *Acacia* species, as a part of the many growing species in it. The aim of the present work is to do morphological and comparative anatomical study of wood of the *Acacia* species growing in Wadi Fatma. The study includes the morphological description of the *Acacia* species and studying of the structure woody stems of: *Acacia* *asak*, *A. ehrenbergiana*, *A. gerrardii*, *A. hamulosa*, *A. mellifera*, *A. raddiana*, *A. seyal* and *A. tortilis*. The results of the morphological features of the studied species show the presence of major and minor morphological characters, which can be used for dividing *Acacia* species into two groups: The first consists of *A. asak*, *A. mellifera* and *A. hamulosa*, these can be distinguished by the pedicellated spike inflorescence, prickles instead of spiny stipules. *Acacia mellifera* characterized by the compound pinnaty leaves of 2 pairs leaflets and the short curved prickles in pairs; whereas, *A. asak*, and *A. hamulosa* can be distinguished by the currency of compound pinnaty leaves of 2-7 pairs leaflets. The hard short curved tri- prickles separate, *A. asak* from *A. hamulosa*, which their middle prickles, is curved down and the others directed upward. The second group includes: *A. ehrenbergiana*, *A. gerrardii*, *A. raddiana*, *A. seyal* and *A. tortilis*, which are characterized with the pedicellated head inflorescence and the spiny stipules. Species of *A. tortilis*, and *A. raddiana* can be distinguish from other three species in this group by the spiral twisted legumes. Branches, leaves and legume of *A. tortilis* are pubescent; while all are smooth in *A. raddiana*. The curved legumes separate species of *A. ehrenbergiana*, *A. gerrardii*, and *A. seyal* into two subgroups as follow: *A. gerrardii* with a pubescent branches, leaves and legumes, while *A. ehrenbergiana*, and *A.*