MainPage
About College
Files
Researches
Courses
Favorite Links
Our Contacts

Research Details :

Research Title : *Taxonomic Studies Of the Genus Zygophylluml (Zygophyllaceae) In Saudi Arabia*

دراسة تصنيفية لجنس الزيجوفيللم (العائلة الرطريطية) بالمملكة العربية السعودية

Descriptipn : Zygophyllum L., the largest genus of Zygophyllaceae comprises about 100 species known from the Meditterranean to Central Asia, more than eleven species growing in Saudi Arabia specially in desert and saline habitats, This study deals with taxonomy of Zygophyllum species growing in Saudi Arabia depending on morphological and anatomical characters of stems, leaves, and petioles to eleven investigated species. By comparing the morphological results of eleven Zygophyllum species under investigation, Z. album; Z. boulosii; Z. coccineum; Z. decumbens; Z. fabago; Z. hamiense; Z. mandavillei; Z. migahid; Z. propinquum; Z. qatarense and Z.simplex, we conclude that we have characters of major importance such as plant habitat, shape of leaves and characters of minor importance such as shape, and size of the fruit. Those characters enabled the construction of an artificial morphological key separating Z. simplex from the other ten species by its herbaceous habitat and simple sessile leaves. The other ten investigated species divided into too categories, one with lower simple and upper compound leaves and include Z. hamiense; Z. mandavillei; Z. qatarense the other with upper and lower compound bifoliate leaves include Z. album; Z. boulosii; Z. coccineum; Z. decumbens; Z. fabago; Z. migahidii; Z. propinquum Characters of shape, and size of the fruit and shape of leaflets can be differentiated between the ten species of the two categories. Anatomical features of stem, leaves and petiole of the elven investigated Zygophyllum species show characters of major importance such as stem outline, leaf outline, the arrangement of leaf vascular tissue, in addation to the number of vascular bundles in the inner leaf whorl, and characters of minor importance such as leaf mesophyll, and the branching of the main vascular bundle in the petiole Those characters enabl us to separate Z. simplex from the other ten species by its cup shape transverse section in stem. One layer of stem epidermal cell covered with cuticle, followed by homogenous cortex either in some species, or heterogynous cortex in other species. alos pith may be heterogenous in species, and homogenous of unlignified parenchyma in others. leaf or leaflet out line in cross section show hight differentiation. Wavey, kidney, ovate and line margin. epidermal cell with stomata, covered with cuticle. Mesophyll composed of palasied and spongy tissue in all species except Z. decumbens and Z. fabago with mesophyll of only one type of parenchyma cells. Leaf vascular