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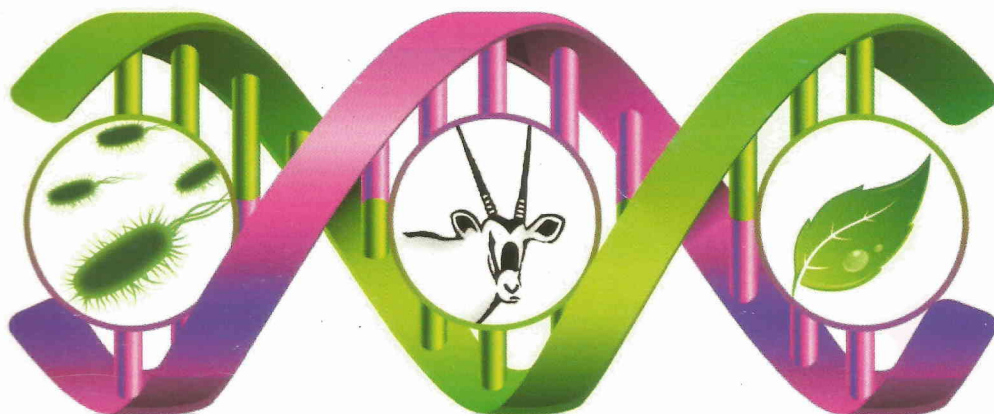
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ABSTRACT BOOK

FEBRUARY 10-13, 2013



International symposium of
**BIOTECHNOLOGY
& CONSERVATION**
OF SPECIES FROM ARID REGIONS

Florida E. Nevado (*Design & Management*)


International symposium of
**BIOTECHNOLOGY
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OF SPECIES FROM ARID REGIONS
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Molecular Identification of Nine Species of the Genus *Cassia sensu lato* in Sudan

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Cassia sensu lato (L.), a member of legume family: Fabaceae. It is considered an important genus due to its various economical uses especially for medicinal purposes. Random amplified polymorphic DNA (RAPD) markers were used to assess genetic relationships in *Cassia sensu lato* (L.). RAPD technique was carried out in a set of 9 *Cassia* species collected from different regions of Sudan. 10 RAPD primers (10 mer) produced clear bands and generated 183 scorable amplified products, all were polymorphic (100%). An average of 18.3 bands was obtained per primer. The number of bands per primer ranged from 15 to 24, whereas the number of polymorphic bands also ranged from 15 to 24, corresponding to 100% of the amplification products. UPGMA clustering resulted in two major clusters and two out of group. It was concluded that the high level of polymorphism found suggest that RAPD technique can be useful to study *C. sensu lato*. The information provided in this study, can be useful to help in reclassifying *Cassia* species that were previously classified using only morphological descriptors.

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Morphological and Anatomical Broad of *Acacia Raddiana* and His Adaptation in Saharan Area

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is real name *Acacia tortilis* (Forsk.) Hayne ssp. *raddiana* (Savi) Brenan, belonging to the Fabaceae family is renowned for its xerophytic character supporting water-deficient environments. The purpose of this study is to determine the morphological, anatomical and have assured this taxon its growth and perpetuation in a hostile environment such as the Algerian Sahara. In this respect, the choice of the region has set on that of M'éguiden owned, administratively, the Daira of Timimoun to denote plant samples duly listed in three age groups based on measuring the circumferences of their trunks. The results indicated that the species *Acacia raddiana* is characterized by parameters that have allowed the plant to adapt to conditions including the Sahara; trichomes on both surfaces of leaves and inflorescences, and the existence of thorns. A paracytic type of arrangement stomatal, and a mesh grid structure in the roots intercepting the flow of water.

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Genetic Variability and Molecular Fingerprinting of Some Wild Egyptian Gramineae Plants

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Fourteen Gramineae genotypes, collected from North and North West of Delta, were characterized using; Random Amplified Polymorphic DNA (RAPD) and Inter-Simple Sequence Repeats (ISSR) molecular techniques. Twelve RAPD primers were used, gave a total of 262 (82.61%) polymorphic out of 316 bands. Fifty-four RAPD fragments were found to be useful as genotype-specific markers. In ISSR analysis, 323 out of 391 ISSR bands were polymorphic, using 13 ISSR primers. Sixty-eight ISSR fragments were found to be useful as genotypes-specific markers. A higher number of specific bands were produced with the ISSR than with the RAPD technique. RAPD-PCR and ISSR-PCR amplified products showed that, the highest number of polymorphic bands (48 bands) were with the primers Z-17 and S6, respectively. Both techniques showed comparable results, with extensive diversity between the Gramineae landraces. Similarity index varies from 49.1% to 83.0% for RAPD and 52.2% to 81.2% for ISSR markers. The dendrogram using RAPD and ISSR analysis separated the 14 genotypes into two major groups. The genotypes, which grouped together, based on ISSR analysis were more related than those based on RAPD analysis. The present study showed that RAPD and ISSR analyses are useful for generating specific markers of Gramineae flora in North and North West Coast of Egypt. This information provides database for wild Gramineae species, can later be used for the introduction of abiotic stress-tolerance genes into economic plants, allowing it's cultivation under drought or salty conditions. Thus the cultivated area in Egypt would be extended. Molecular genetics characterization not only provides database for genetic biodiversity, but also is a necessity for the protection of Egyptian royalties of the landraces.

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Study of Some Anatomic Adaptation Properties of Principal Spontaneous Perennial Plants in the Region of Ouargla (Algeria)

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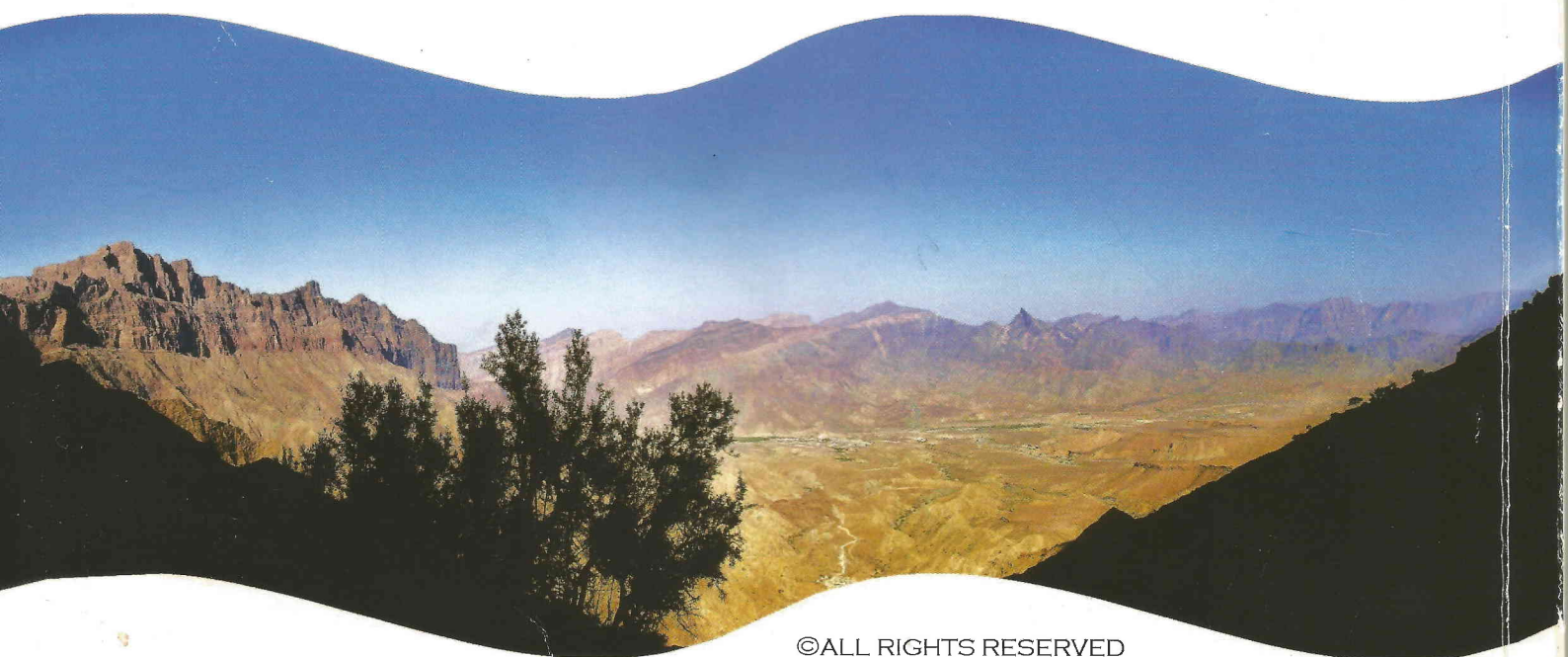
This study focuses on the characterization of some properties of anatomical adaptation of the main perennial wild plants in the region of Ouargla (Algeria). Despite the morphological adaptation mechanisms aimed mainly at preserving as much water as possible, either by the succulence, or by reducing the size of organs, these Saharan plants present other mechanisms even more complex. Indeed, tissue architecture offers even more opportunities to adapt to the Saharan plants: first, by the presence of hair, cuticle or the existence of a multilayered epidermis that causes the depression of the stomata; second, by varying the structure of the parenchyma, which determines the type of photosynthetic pathway. A study of leaf or stem anatomy of the major perennial wild plants in the region of Ouargla shows that the plants studied have various coping mechanisms Anatomy, among others, the change in parenchymal structure that determines the type of photosynthetic pathway, with the presence of C3 species (composed of a layer of cells all lying) and that of C4 (organized in two different seats elongated cell and cubic cell).

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Effect of Water Stress on Physiological and Biochemical Characteristics of Nine Chickpea (*Cicer arietinum*) Genotypes

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Food Legume Breeding, Morocco



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