ANGIOSPERMAE AGE AND AREA. SOME UNANSWERED QUESTIONS ON BIOGEOGRAPHY

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Vicarious speciation as a dominant view is partly due to an acceptation of natural selection as the main factor of accumulation of adaptive traits in plants and animals. Angiospermae offer an unique condition of evaluating species evolution and biogeography for the very reason of having the totality of families alive. J.C. Willis introduced the idea that a [family / genera / species] are as much older as they are more widely geographically distributed. His arguments must be reviewed for the sake of understanding more properly speciation, biogeography and plate tectonics. Some of his arguments are based on the following evidences [1] a cladistic differentiation [2] mutation as the main cause of genetic transformation [3] morphic aspects are not always strictly adaptive [4] the position of large families and of large genera in large families [6] the statistics of families / genera / species given by a mathematical function [7] geographical distribution - age and area, contours maps with more densely congregation of species (small and moderate sized) towards the centre of the distribution of the genus, taxonomic resemblance of widely separated plants, variety of characters with uniform conditions, common type of distribution, large genera as the most successful, overlap of largest genera in a family and the relation of monocotyledons to dicotyledons. World maps of the Recent are used to discuss arguments favouring and opposing the Theory of Age and Area. Other contributions such as those of A. Thakhtajan will be compared considering centres of origins and trajectories of dispersion.