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Phylogenetic Implications of *matK* Sequences in Caprifoliaceae

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In order to clarify phylogenetic relationships of Caprifoliaceae *s. lat.*, *matK* sequences were analyzed for all genera of the family. Also some closely related taxa were included. Molecular analyses generated very robust phylogenetic trees, clearly indicated that family Caprifoliaceae in traditional sense was not monophyletic. Seven major clades, such as *Sambucus-Adoxa*, *Viburnum*, *Diervilla*, *Lonicera*, *Heptacodium*, *Linnaea* and *Zabelia*, were recognized. Among them, *Sambucus-Adoxa* and *Viburnum* were placed at the base of the phylogenetic tree. These results suggest that those clades be recognized as distinct families.

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Phylogenetic Implications of ITS Sequences in *Spiraea* (Rosaceae)

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In an attempt to elucidate relationships of genus *Spiraea* (Rosaceae), ITS sequences were analyzed various taxa of the genus. Also some closely related taxa were included. Molecular analyses generated very robust phylogenetic trees clearly indicated that some infrageneric taxa of genus *Spiraea* in traditional sense was not monophyletic. Six major clades, such as *Chamaedryon*, *Triloba*, *Metachamaedryon*, *Glomerati*, *Spiraea* and *Calospira* were recognized. Among them, sect. *Chamaedryon s. str.* were placed at the base of the phylogenetic tree. These results suggest that infrageneric taxa in *Spiraea* based on inflorescence only should be re-examined, and those clades be recognized as distinct sections.