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Characteristics of the Stem-Leaf Transitional Zone in Some Species of Caesalpinioideae
(Leguminosae)

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Abstract: The vascular supply of the proximal, middle, and distal parts of the petiole were studied in 11 caesalpinoid species with the aim of documenting any changes in vascular anatomy that occurred within and between the petioles. The characters that proved to be taxonomically useful include vascular trace shape, pericyclic fibre forms, number of abaxial and adaxial vascular bundles, number and relative position of secondary vascular bundles, accessory vascular bundle status, the tendency of abaxial vascular bundles to divide, distribution of sclerenchyma, distribution of cluster crystals, and type of petiole trichomes. There is variation between studied species in the number of abaxial, adaxial, and secondary bundles, as seen in transection of the petiole. There are also differences between leaf trace structure of the proximal, middle, and distal regions of the petioles within each examined species. *Senna italica* Mill. and *Bauhinia variegata* L. show an abnormality in their leaf trace structure, having accessory bundles (concentric bundles) in the core of the trace. This study supports the moving of *Ceratonia* L. from the tribe Cassieae to the tribe Detarieae. Most of the characters give valuable taxonomic evidence reliable for delimiting the species investigated (especially between *Cassia* L. and *Senna* (Cav.) H.S.Irwin & Barneby) at the generic and specific levels, as well as their phylogenetic relationships.

Key Words: Abaxial, adaxial, accessory, secondary vascular bundles, indumentum, pericyclic fibre

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