
Morphology and anatomy of the fruit and seed of *Styrax camporum* Pohl. (Styracaceae), a “cerrado” species of São Paulo State

Priscila Greyse dos Santos Julio

Abstract

Styrax camporum Pohl. (Styracaceae), a typical tree of the Brazilian “cerrado”, is popularly known as “benjoeiro”, “estoraque-do-campo”, “cuia-do-brejo”, “canela-poca”, “fruta-de-pomba”, “pindaíba” and “laranjeirinha”. In Brazil, there are about 25 species of *Styrax*; three of them are found in the “cerrado”.

Morphological and anatomical works on this species are scarce. Some include the vegetative and few the reproductive organs. These latter emphasizing ones, only the whorls; no paper was found on fruit and seed.

Considering this literature gap, the aim of this work is to describe *S. camporum* fruits and seeds morphological and anatomical aspects, in different developmental stages, in order to characterize them and to observe structural patterns which indicate adaptation to the “cerrado”. Individuals from the “cerrado” region of Pratânia and Botucatu, São Paulo State, Brazil, were analyzed and processed by standard techniques. Developing fruits were classified into four stages: I – initial stage, characterized by floral bud ovaries; II – post-anthesis flower ovary and young fruits; III – non-mature adult fruits; IV – mature fruits.

S. camporum fruit is fleshy and monospermic, with a persistent calyx. The pericarp presents a unisseriate exocarp, with stellate lignified trichomes and dome-shaped cells of irregular sizes. The mesocarp consists of multisseriate parenchyma, radially elongated up to maturity. Druses and phenolic idioblasts are dispersed in the mesocarp. Vascular bundles are observed in the mesocarp inner third part. In spite of the fact that the fruit of this species is classified as drupe, its endocarp is composed of only a few fiber layers, without forming the pyrene with the typical hardness of these fruits. The endocarp fusion with the seed coat is not seen. The seed is typical of the Styracaceae; it is unitegmic, with multisseriate and thick testa. The exotesta is unisseriate and some layers of stone cells are seen in the outer mesotesta. Internally to these cells, some vascular bundles occur, followed by numerous layers of parenchyma cells, containing evident lipid reserve. The embryo is axial, straight, and spatulate, consisting of typical embryonic axis and leaf-like cotyledons. Some characteristics observed in the pericarp reflect adaptations to the “cerrado”, such as the presence of numerous trichomes and the occurrence of crystals and phenolic idioblasts in the mesocarp.

Key-words: morphology, anatomy, ontogeny, fruit, seed, pericarp, Styracaceae

FICHA CATALOGRÁFICA

Julio, Priscila Greyse dos Santos.

Morfologia e anatomia de frutos e sementes de *Styrax camporum* Pohl. (Styracaceae), espécie de cerrado do Estado de São Paulo / Priscila Greyse dos Santos Julio. – 2003.

Dissertação (mestrado) – Universidade Estadual Paulista, Instituto de Biociências de Botucatu, 2003.

Orientador: Denise Maria Trombert de Oliveira

Assunto CAPES: 20300000

1. Anatomia vegetal 2. Morfologia vegetal

CDD 581.40981

Palavras-chave: Anatomia; Frutos; Morfologia; Sementes; *Styrax camporum*.