

Kirkbride, J.H., Jr., Gunn, C.R., Weitzman, A.L., Dallwitz, M.J.: **Legume (Fabaceae) Fruits and Seeds.** (Interactive Identification and Information Retrieval Runs Under MS-Windows 95, 98, or NT.) - Parkway Publishers, Boone 2000. USD 75.00. (CD-ROM).

The *Fabaceae (Leguminosae)* consisting of 685 genera with approximately 17 000 species represent the third largest family of angiosperms after *Asteraceae* and *Orchidaceae*, and include various plant types from annuals, herbaceous perennials, shrubs, and trees spread worldwide. There is a large number of economically important legume species whose uses range from human food, fodder, and wood to spices and ornamentals; only the grasses (*Poaceae*) are more economically important than the legumes. The *Fabaceae* have three subfamilies with following distribution of genera: *Caesalpinioideae* with 156 genera, *Mimosoideae* with 76 genera, and *Faboideae* with 453 genera.

This CD-ROM contains a worldwide database of legume genera. Fruit and seed morphology and distributions are recorded for each genus, and images are attached. The interactive software system *INTKEY* (interactive identification and information retrieval) is used for accessing the data and images. This package can be used for identifying the genus of unknown samples or for querying the data and images for legume genera. The information and images are maintained in *DELTA* format by the USDA Agricultural Research Service, Systematic Botany and Mycology Laboratory, Beltsville, Maryland, USA. The project began in 1981 (C.R. Gunn), and a series of printed papers have culminated in this electronic publication.

The CD-ROM contains description of 647 legume genera based on fruit characters and 634 genera based on seed characters. The correct scientific name and its author(s) are used for each genus. The classification is modified according to recently published findings and contains following data: phylogenetic number; subfamily; tribe; subtribe, when used; group, when used; number of species; and number of species examined. 157 fruit characters and 127 seed characters are recorded for each genus. The native distribution of each genus as well as a

complete bibliography is given. Over 200 character and 1 375 generic images are attached to the database. When adequate materials were available, fruit and seed photographs and/or drawings, testa scanning electron microscope images at 50 and 1 000 magnifications, and embryo and cotyledon drawings are given. The *INTKEY* program is efficient and friendly for user and is based on interaction between user and the data. Unlike traditional identification tools, which required the use of specific characters in a defined order, any characters of the users' choice can be employed in any order. Users can visually pick the character states as an identification proceeds. Integration of the generic images allows visual comparison of one or more genera with an unknown specimen at any stage during the identification for rapid verification. When a single genus remains as a result of identification, a verification may be done by comparing the specimen with the illustrations and/or descriptions of the genus. The fruit illustrations associated with a genus are automatically displayed at completion of an identification. The user can obtain a full description, a diagnostic description, the classification, distribution, and note, or any other illustrations by clicking the Information button. The diagnostic description only uses characters that have not been used in the current identification, and distinguishes the remaining genus from all others by at least one character. Despite of the Normal Mode, the Advanced Mode with five more menu selections is available. With the use of latter one the customized queries can be performed listing genera with or without particular characters and distributions, singly or in combination. Extensive explanations and information are provided through the Help menu.

The CD-ROM can be recommended as a valuable tool for seed analysts and technicians, port inspectors, weed scientists, ecologists, botanists and all those who need to identify isolated legume fruits and seeds.

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