



THE BEAN BAG

A newsletter to promote communication among research scientists concerned with the systematics of the Leguminosae/Fabaceae.

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SPECIAL NOTICE TO ALL BEAN BAG READERS: THIS IS THE READER SURVEY ISSUE. IF YOU WISH TO CONTINUE TO RECEIVE THE BEAN BAG, PLEASE CHECK YOUR ADDRESS ON THE ENVELOPE AND RECORD CHANGES ON THE ATTACHED YELLOW PAGE AND RETURN THIS PAGE. IF NOT RETURNED BY MARCH 1, 1984, YOUR NAME MUST BE DROPPED FROM THE MAILING LIST. SEND YELLOW PAGE TO: MRS. LYDIA R. POOLE, BLDG. 265, BARC-EAST, BELTSVILLE, MD 20705 USA.

SECOND INTERNATIONAL LEGUME CONFERENCE by Charles Stirton

The Second International Legume Conference will be held on 16-20th June 1986 at the Missouri Botanical Garden, St. Louis, USA. The Conference will be devoted to the Biology of Legumes and is being jointly organized by the Royal Botanic Garden, Kew and the Missouri Botanical Garden, St. Louis. The organizing committee is R. M. Polhill, P. Raven, C. H. Stirton and J. Zarucchi.

Sixteen speakers have agreed to participate. We will publish a provisional program in the next Bean Bag at which time we will call for additional papers to fill out the allotted time. The following speakers will participate: Their talk titles are provisional.

A. Reproductive Biology.

1. F. Webberling: Structure, evolution and biology of inflorescences.
2. K. Ferguson: Structure, evolution and biology of pollen.
3. S. Tucker: The evolutionary and biological implications of floral morphogenesis.
4. B. Knox: Pollen, stigma, style interactions in Mimosoideae.
5. S. Owens: Pollen, stigma, style interactions in Caesalpinioideae.
6. Heyne: Stigma structure and development, pollination mechanism, and breeding system in some species of Papilionoideae.
7. G. Keighery: Pollination biology of Australian legumes.

B. Life History Studies.

8. R. Oldeman: Biological implications of tree architecture.
9. D. Janzen: Biology of *Ateleia herbert-smithii*, a sophoroid tree.
10. R. Foster: Monocarpy in *Tachigalia versicolor*, a caesalpinoid tree.
11. B. Schaal: Biology of annual Texas legumes.
12. U. Plitmann: Biological changes induced by domestication.
13. U. Plitmann: Defence in diaspores of annual legumes.
14. H. Rees: Biological implications of genome evolution.

C. Herbivory and Chemical Evolution.

15. Klinghaufl: Aphid-legume interactions.

D. Mycorrhizal Relationships.

16. Pirozynski will be organising four speakers to cover this topic.

The Proceedings of the Conference will be co-edited by C. H. Stirton and J. Zarucchi and will be published by the Missouri Botanical Garden as "Advances in Legume Biology." Zarucchi will be the Conference Convenor in St. Louis and Stirton the program co-ordinator. Correspondence regarding the Conference should be sent to C. H. Stirton, The Herbarium, Royal Botanic Gardens, Kew, TW9 3AB, ENGLAND.

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Advances in Legume Systematics, Volume 2
by Charles Stirton

The renewed impetus in legume research generated by "Advances in Legume Systematics" and its companion volume "Advances in Legume Science" has opened up new areas of research which will not be covered by the next Conference. To ensure that these research areas will be accessible to the scientific community, it has been decided to publish a companion volume to "Advances in Legume Systematics." A number of scientists have expressed an interest in this project, and the following papers have been agreed to in principle: History of legume classification, cladistic methods and generic delimitation, embryology, floral morphogenesis, leaf morphogenesis, stomatal types and distribution, and seed color.

The emphasis in this new volume will be given to morphology and anatomy, history, methods of classification, data bases, critical revisions at the generic and suprageneric level and finally biogeography. Papers should be of a review nature and will be refereed. If you would like to participate in this project, please write to the Editor: Charles Stirton, The Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey, TW9 3AB, ENGLAND, Great Britain.

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MIMOSOIDEAE MEETING

The 5th Meeting of the International Group for the Study of Mimosoideae will be held in Mexico City, MEXICO, in connection with the IX Congreso Mexicano de Botanica in September, 1984.

Information: Dr. J. Vassal
Secretariat of IGSM
Laboratoire de Botanique
Universite Paul Sabatier
39 Allee J. Guesde
31077 Toulouse Cedex
FRANCE

R. Grether
Secretaria Ejecutiva
Sociedad Botanica de Mexico, A.C.
Apdo. Postal 70-385
Deleg. Coyacan
04510 Mexico, D.F.
MEXICO

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NEW SOCIETY
by G. A. Rosenthal

Recently, the "International Society of Chemical Ecology" was founded in association with the "Journal of Chemical Ecology". This Society is devoted to promoting the understanding of the origin, function, and significance of natural chemicals that mediate interactions within and among organisms. Membership dues are \$15 for established workers and \$10 for graduate students. The business of the Society is being conducted at: 101 T.H. Morgan Building, University of Kentucky, Lexington, Kentucky 40506.

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HERBARIUM NEWS
by N. R. Morin and M. R. Crosby, editors
Missouri Botanical Garden
P.O. Box 299
St. Louis, MO 63166 USA

\$5.00 (US) North America, \$7.00 (US) elsewhere

Herbarium News is being published for several purposes:

- 1) To bring together specialists and collections by printing a list of taxa that have been requested for loan, so that other herbaria with good holdings of those taxa may offer their material to the investigator for study.
- 2) To keep herbaria abreast of developments in curatorial practices such as fumigation and preservation of material, and changes in postal regulations.
- 3) To announce changes in staff. Fortunately, a new Index Herbariorum is available, and Herbarium News will provide a means of updating this index.
- 4) To announce changes in collections, such as transfers, acquisitions, and merges.
- 5) To provide a means for publicizing job openings in curatorial and support staff.

Herbarium News will supplement such publications as Plant Science Bulletin, Taxon, and the ASC Newsletter, because items will be timely and brief and will treat (in part) details that are of interest mainly to the herbarium community.

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ADDITIONS AND CORRECTIONS
TO NOVEMBER 1982 DIRECTORY

ADDITIONS:

AGULLO, Maria Aurora; Catedra Plantas Vasculares, Facultado Ciencias Exactas y Naturales, Ciudad Universitaria, Nunez, CP. 1428, Buenos Aires, ARGENTINA; (Chromosome numbers in Phaseoleae.)

BATTHYANY, Carlos; Dr.; Calle:1. No. 2620. Esq. Amberes. Carrasco, Montevideo. R.O., URUGUAY.

HAHN, William James; Botanist; P.C., U.S. Embassy, Asuncion, PARAGUAY.

HOHENSCHUTZ, Liza; Dr.; 1214 Race Street, New Orleans, LA 70130.

KARATELA, Y. Y.; Dr.; Bendel State University, Ekpoma, NIGERIA; (Epidermal morphology and stomatogenesis of Nigerian legumes.)

LAKSHMANAN, K. K.; Dr.; Professor, Department of Botany, Bharathiar University, Coimbatore 641 046, INDIA.

MONCUR, Michael; Division of Water & Land Resources, Institute of Biological Resources, C.S.I.R.O., P.O. Box 1666, Canberra City, A.C.T. 2601, AUSTRALIA.

NAIR, K. K. N.; Dr.; Kerala Forest Research Institute, Peechi-680 653, Trichur Dist., Kerala, INDIA.

PAUL, Boon; Dr.; Jalan Pattimura 5, Ambon, INDONESIA; (Legume improvement.)

PEABODY, Fredrick; Mr.; Botany Department, Iowa State University, Ames, Iowa 50011 (Robineae.)

PHON, Pauline Y.; Dr.; Laboratoire de Phanerogamie, Museum National d'Histoire Naturelle, 16 rue Buffon, 75005 Paris, FRANCE

SPRADA, Aldalea; Instituto Nacional de Pesquisas da Amazonia, Botanica, CP. 478, Manaus, AM 69000, BRAZIL.

VIEIRA, Maria das Gracas; Instituto Nacional de Pesquisas da Amazonia, Botanica, CP. 478, Manaus, AM 69000, BRAZIL.

CORRECTIONS:

BEAUCHAMP (New address): 1843 East 16th Street, National City, CA 92050 USA

BROWN (New address): Institut Fur Biologie III, Schanzlestrasse, 1, D-7800, Freiburg, West Germany

DELBOS (New address): I.B.E.A.S., Casino Municipal, Parc Beaumont, 64000 Pau, FRANCE

NABHAN (New title and address): Dr.; Native Seeds/SEARCH, 3950 West New York Drive, Tucson, Arizona 85745 USA

NASH (New address): Jodrell Laboratory, Royal Botanic Gardens, Kew, Surrey, TW9 3DS ENGLAND

THOTHATHRI (Change): Drop: Deputy Director, Central National Herbarium and replace with: Joint Director

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GLEANINGS

CLEMONS is working with *Psophocarpus tetragonolobus* and *Vigna sinensis* subsp. *sesquipedalis*. Needs legume seed germination literature and 25-30 seeds of *Cajanus cajan*, *Vigna unguiculata*, *V. umbellata*, *V. radiata*, *Glycine max*, *Phaseolus lunatus*. Offers seeds of *Leucaena leucocephala* and *Sesbania punctata*. [Ed. note: Send your seed want list to Dr. G. A. White, Plant Introduction Officer, Room 322, Bldg. 001, BARC-West, Beltsville, MD 20705 USA.]

DELBOS needs seeds of *Lathyrus heterophyllus*, *L. latifolius*, *L. sylvestris*, *L. tuberosus*. Offers seeds of *Lathyrus* species of France. [Ed. note: Send your request to Dr. White (address above) and to BISBY. Thank you for your comments.]

DUKE is studying seedlings of *Apios* and needs viable seeds of *Apios americana* and other species. Offers vouchered seeds of local *A. americana*. With wife Peggy authored "Medicinal Plants of the Bible." [\$44.95 (US), Conch Magazine Ltd., 102 Normal Ave., Buffalo, New York 14213, USA.]

EVANS obtained Ph.D., based largely on a chemotaxonomic study of the Tephrosieae (to be published shortly) and wishes to thank all Readers, who provided seeds and data. Has started (with STIRTON) a chemotaxonomic study of the Sophoreae. Needs 1 to 5 gram samples of viable seeds of Sophoreae. Offers seeds of the Tephrosieae.

GEESINK. See VIDAL

GILL has started three studies of Nigerian leguminous trees: 1) Seedling evaluation and bioisomerism, 2) stomatogenesis, and 3) microanatomy and histochemical characteristics of bark. Needs information on sclerids in legume seeds.

GRETHER has started studies of the *Mimosa* spp. for "Flora Mesoamericana" and for "Flora de Nicaragua." Needs herbarium specimens of *Mimosa* for identification and offers herbarium specimens of Mexican *Mimosa* spp. Will identify *Mimosa*. Also see Mimosoideae meeting announcement.

GUNN has finished second draft of his fruit-seed morphology study of genera in the Caesalpinioideae and just finished proof reading the galley for the genera of the Mimosoideae. Offers to those who request and send a self addressed label these USDA Tech. Bulls.: 1601 "Genus *Vicia* With Notes About Tribe Vicieae (Fabaceae) in Mexico and Central America"; 1667 "Testa Characters in Tribe Vicieae, With Notes About Tribes Abreae, Cicereae, and Trifolieae (Fabaceae)"; 1574 "Classification of *Medicago sativa* L., Using Legume Characters and Flower Color."

HUSAINI has finished his research on the cytomorphology of Nigerian legumes and is now preparing his dissertation. Plans to submit it to the University of Benin in March 1984.

LARSEN, KAI is revising *Hoffmannseggia* of America.

LARSEN and LARSEN. See VIDAL.

MARECHAL has started an analysis of plant genetic resources data for *Phaseolus vulgaris*, cultivated and wild forms.

MASLIN with Eric E. Conn (University of California, Davis) is studying *cyanogenesis* in Australian *Acacia* spp. Was in USA during May of 1983: Davis, California; Missouri Botanical Garden; Salt Lake City; Field Museum; Urbana, Illinois.

Maxwell has been granted a year's sabbatical to complete work begun some time ago on the "Flora of Ceylon" and the *Diocleinae*.

NABHAN completed his Ph.D. and reports that Native Seeds/SEARCH, a new nonprofit conservation organization, is collecting, storing and distributing seed of *Phaseolus*, *Macroptilium*, *Canavalia*, and *Indigofera* from northwest Mexico and southwest USA. Will contract-collect seed for breeders and taxonomists. Collected wild *Phaseolus* with R. Buhrow (University of Arizona) in northwest Mexico and attended *Phaseolus* Committee meeting at the Internal Board of Plant Genetic Resources, Hamburg, Germany.

NAIR needs literature of Indian spp. of *Dalbergia*. Offers references on floristics and families of Indian flowering plants. Has started a germplasm bank for *Dalbergia* in Kerala under sponsorship of the Department of Environment, Government of India.

NASH received his Ph.D. and has new address. Needs seeds of *Angylocalyx* spp. and offers European legume seeds. Has started a chemotaxonomy study of *Sophoreae* exudates from roots and seeds.

PEABODY is interested in research (published or unpublished) on the new world *Robineae* and would like to obtain seeds of the new world species of these genera: *Bembicidium*, *Corynella*, *Coursetia*, *Cracca*, *Diphysa*, *Genistidium*, *Gliricidia*, *Glottidium*, *Hebestigma*, *Lennea*, *Notodon*, *Olneya*, *Poissonia*, *Poitea*, *Robinia*, *Sabinea*, *Sesbania*, *Sphinctospermum*.

PHON (new reader). See VIDAL.

RAO, M. M. has started SEM studies of stomatal and seed morphology of wild species of *Cicer* and *Arachis*, and pollination biology with regard to dimorphism of stamens and styles in selected tropical pulse crops. Needs seeds of wild species of *Cicer*, *Arachis*, and *Lathyrus*. Offers seeds of *Mucuna* spp. and *Phaseolus atropurpureus*. Plans to collect herbaceous legumes in the forest areas of Kamareddy.

RODRIGUEZ-PEREZ has started an introduction of forage legume trees and shrubs for the arid zones in the Canary Islands. Need seeds of *Prosopis chilensis* and *P. alba* as well as *Acacia victoriae*. Write for list of offered seeds.

SPRADA (new reader) is revising *Cynometra* of the Amazonia and needs literature, type photographs, and herbarium specimens. Will be collecting for Flora Amazonica project.

STIRTON reports: 1) Recently completed SEM study of leaf surfaces of all 45 genera of Sophoreae and of most American species for the tribe; 2) continuing with seed morphological and anatomical study of sophoroid seeds (65 species written); 3) completed review of stomata in Leguminosae; 4) will shortly submit to press a detailed account of a new South African genus POLHILLIA (tribe Crotonarieae, allied to *Melolobium* and *Dichilus*) with 3 species. Needs seeds of *Ormosia* spp. from America, China, and southeast Asia. Will annotate American Sophoreae. Wants to hear from anyone interested in legume phytogeography with view of establishing a study group to report at next legume symposium (Missouri Botanical Garden, 1986). See EVANS and announcements on first two pages.

THOTHATHRI reports that a taxonomic revision of tribe Hedysareae of India is nearing completion, revision of tribe Cajaneae in India is in progress, and *Sophora* of India is being studied. Needs tropical material for Tephrosieae, Dalbergieae, Hedysareae, and Cajaneae. Offers species of Hedysareae and Cajaneae. Returned from collecting in western Ghats and in 1984 will collect in Arunachal Pradesh.

TUCKER has in press, "Origin of Symmetry in Flowers." In Contemporary Problems in Plant Anatomy (Eds. R. A. White and W. C. Dickison). Academic Press. [The major part of this paper describes floral development in legumes.] She also started study of taxonomically significant criteria of the three subfamilies of legumes (such as floral symmetry, order of initiation of floral organs, aestivation, number and arrangement of floral organs, onset of fusion, and loss of floral parts). Additional collections in FAA of developmental stages would be welcomed, particularly representatives of Swartzieae, Sophoreae, Amherstieae, and Detarieae. Also would like developmental material in fixative of *Bauhinia* spp. with less than 10 stamens.

VIDAL reports on two new projects: 1) Caesalpinioideae for "Flora of Thailand" by K. LARSEN, S. S LARSEN & VIDAL are now in press at Bangkok and 2) Papilionoideae for Flore du Cambodge, Laos, Viet Nam are being revised PHON and N. V. Thuan at Paris Herbarium and by GEESINK at Leiden.

VIEIRA (new reader) is revising *Crudia* for Amazonia and needs literature, photographs of types, and herbarium specimens. Will collect for Flora Amazonica project.

YAKOVLEV and postgraduate student A. Polovinko started a study of *Caragana* and needs *Caragana* material from Asia as well as seeds of *Ormosia balansae* from Vietnam. Will be collecting in Middle Asia and Vietnam in 1984. Will annotate Sophoreae, *Caragana*, *Hedysarum*. Needs legume literature for review in Bot. Zhur. (Leningrad).

ZARUCCHI. James L. Zarucchi will join the herbarium staff of the Missouri Botanical Garden as Assistant Curator in January 1984. Zarucchi will initiate a program of study of the neotropical Leguminosae, including field and herbarium work. An important part of this program will be the compilation and maintenance of a computer-based data bank on neotropical legumes. Initially the bank will consist of a basic checklist of names and citations, but the system will be set up in such a way that many additional fields may be added to each record. Zarucchi received his Ph.D. from Harvard University in 1981 and spent post doctoral years at Kew, British Museum, and the Smithsonian. This new program is made possible, in part, by a grant from the General Services Foundation, Minnesota.

ZOHARY, Michael, died April 1983. One of the founders of botanical research in Israel.

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RECENT LITERATURE

ARCO AGUILAR. 1983. Catalogo actualizado de los taxones del genero *Teline Medicus* en la region Macaronesica. Adiciones y nuevas combinaciones. *Vieraea* 12(1-2): 193-232.

ARCO AGUILAR, ACEBES GINOVES & Wildpret de la Torre, W. 1983. Colonizacion vegetal de las arenas saharianas de la playa de las Teresitas, Tenerife (I. Canarias). *Ononido-Cyperetum capitati* Wilpret, Del Arco & Acebes, ass. nov. *Vieraea* 12(1-2): 349-357.

ARCO AGUILAR, & W. Wildpret. 1983. *Fayo-Ericetum arboreae* Oberd. 1965 subas. *Telinetosum* subas. nov. y *Telinetum canariensis* as. nov., nuevas comunidades vegetales para la isla de Tenerife (I. Canarias). *Vieraea* 12(1-2): 329-338.

Anderson, D. N. W. and Farquhar, J. G. K. 1982. Gum exudates from the genus *Prosopis*. *Int. Tree Crop Jour.* 1: 15-24. [Analytical data for gum exudates.]

BAUDOIN. 1982. Etude des premieres dependances d'hybrides intraspecifices en de l'amelioration du haricot de lima (*Phaseolus lunatus* L.) dans les regions tropicales humides de basse altitudo. *Bull. Rech. Agron. Gembloux* 17(2): 105-118.

BROWN, J. R. McFerson, F. A. Buss, and T. C. Hall. 1982. Genetic divergence among commercial classes of *Phaseolus vulgaris* in relation to *Phaseolus* pattern. *Hort. Science* 17, 752-754.

DELBOS. 1983. Le cycle nitrotique chez les plantes: Revue bibliografhique. *Agronomic* 6(3).

DUKE. 1983. Nitrogen fixing trees. pp. 48-51. In the International Permaculture Seed Yearbook, Orange, MA. 72 pp.

Gapochka, G. P., and L. P. Chamara. 1982. Comparative morphological study of pollen grains of the tribes Viciaeae and Galegeae, Papilionaceae: 1. Vestn. Mosk. Univ. Ser. 14, Biol. (2): 12-18.

GILL and HUSAINI. 1982. Cytology of some arborescent Leguminosae of Nigeria. *Silvae Genetica* 31: 117-124.

GUNN. 1983. A nomenclator of legume (Fabaceae) genera. USDA Tech. Bull. 1680. 224 pp. [Anyone who has not received this Tech. Bull., and would like to, should send a request with a self-addressed mailing label. Limited number available.]

HESLOP-HARRISON and HESLOP-HARRISON. 1982. Pollen-stigma interaction in the Leguminosae: Constituents of the stylar fluid and stigma secretion of *Trifolium pratense* L. *Ann. Bot.* 49: 729-735.

HESLOP-HARRISON and HESLOP-HARRISON. 1982. Pollen-stigma interaction in the Leguminosae: The secretory system of the style of *Trifolium pratense* L. *Ann. Bot.* 50: 831-842.

HESLOP-HARRISON and HESLOP-HARRISON. 1983. Pollen-stigma interaction in the Leguminosae: The organization of the stigma in *Trifolium pratense* L. *Ann. Bot.* 51: 571-583.

HESLOP-HARRISON and HESLOP-HARRISON. 1983. Stigma organisation and the control of fertilisation in *Phaseolus*. (In press). From "Phaseolus Bean Breeding"; published papers of meeting held in Hamburg, July, 1983. Ed. R. Reimann-Philipp: EUCARPIA, Section Vegetables.

HNATIUK, MASLIN, and D'Antuono, M. 1983. The distribution of *Acacia* (Leguminosae: Mimosoideae) in Western Australia. Part 3. Numerical analysis of pattern and ecological correlations. *W. Austral. Herb. Res. Notes* No. 8: 1-21.

Hossaert-Palauquim and DELBOS. 1983. *Lathyrus tuberosus*: Biologie et perspectives d'amélioration. *Journal d'Agriculture Tadihonnelle et de Botanique Affliquee*.

ISELY. 1983. *Astragalus* L. (Leguminosae: Papilionoideae): Keys to United States species. *Iowa State Jour. Res.* 58: 1-172. [This paper comprises a complete issue of subject journal. A limited number of end run copies have been ordered and are available for \$4.00. Order from Ms. Christine McDaniel, Iowa State Journal of Research, Rm. 45, Kildee Hall, Iowa State University, Ames, IA 50011. Checks should be made out to the Iowa State Journal of Research. After this supply is exhausted extra copies of the subject issue are available from the Iowa State University Press, State Ave., Ames, Iowa, cost \$7.50, payment to the Press.]

Leelavathi, P. and N. Ramayga. 1982. Trichomes in relation to taxonomy. 1. Mimosoideae. *Geophytology* 12: 6-21.

- MASLIN and HNATIUK. 1983. The distribution of *Acacia* (Leguminosae: Mimosoideae) in Western Australia. Part 4. A descriptive account of *Acacia* districts. W. Austral. Herb. Res. Notes 1: 23-55.
- MAXWELL. 1982. A disjunct new species of *Cleobulia* (Leguminosae) from Mexico. *Phytologia* 51(6): 361-368.
- Misset, M. T., J. P. Gourret, and A. Huon. 1982. Pollen of *Ulex* L. (Papilionoideae): Morphology of grains and structure of the exine. *Pollen et Spores* 25: 369-395.
- Murray, D. R. and WEDER. 1983. Seed proteinase inhibitors of *Pulchellae*, *Acacia mitchellii* Benth. and *A. alata* R. Br.: Exclusion of *A. mitchellii* from *Pulchellae*. *Aust. Jour. Bot.* 31: 119-124.
- NABHAN (editor). 1983. The desert terebinth as a food resource --- a journal symposium. *Desert Plants* 5(1): 1-64. [Available from NABHAN, 3950 West New York Drive, Tucson, Arizona 85745 USA for \$3.10 (US) per copy.]
- NEWELL and HYMOWITZ. 1983. Hybridization in genus *Glycine* subgenus *Glycine* (Leguminosae, Papilionoideae). *Amer. Journ. Bot.* 70: 334-348.
- NICHOLLS and B. A. Bohm. 1983. Flavonoids and affinities of some North American lupines. *Can. Jour. Bot.* 61: 708-730.
- OHASHI. 1982. Nomenclatural changes in Leguminosae of Japan. *Jour. Japan. Bot.* 57: 29-30.
- OHASHI. 1982. The taxonomic position of the genus *Murtonia* (Leguminosae). *Jour. Japan. Bot.* 57: 225-231.
- OHASHI. 1982. The taxonomic position of *Tadehagi rodgeri* (Leguminosae-Desmodieae). *Jour. Japan. Bot.* 57: 264-268.
- Prendota, K., BAUDOIN and MARECHAL. 1982. Fertile allopolyploids from the cross *Phaseolus acutifolius* X *P. vulgaris*. *Bull. Rech. Agron. Gem.* 17(2): 177-190.
- RAO, M. M. and BAHADUR. 1982. Note on the relationship between seedling handedness and root and nodule characters in green gram and black gram. *Indian Jour. Agric. Sci.* 52: 706-708.
- Sindhu, J. S., SLINKARD, and Scoles, G. J. 1983. Karyotypic analysis of *Lens ervoides* Brign. *Crop Sci.* 23: 534-536.
- SMITH. 1983. Cotyledon anatomy in the Leguminosae. *Bot. Jour. Linn. Soc.* 86: 325-355.
- THOTHATHRI. 1983. Studies in Leguminosae 31. New taxa and notes on *Dalbergia* Linn. f. and *Derris* Lour. *Proc. Indian Acad. Sci. (Plant Sci.)* 92(1): 23-28.

VEITMEYER (Study Director). 1983. Calliandra: A versatile small tree for the humid tropics. 52 pp. National Academy Press, Washington, DC.

VEITMEYER (Study Director). 1983. Mangium and other acacias of the humid tropics. 62 pp. National Academy Press, Washington, DC.

Voronchikhin, V. V. 1982. Types of pod opening of some Astragalus spp. Vestn. Mosk. Univ. Ser. 14, Biol. (2): 18-24.

Watson, L. and M. J. Dallwitz. 1983. The genera of Leguminosae-Caesalpinioideae: Anatomy, morphology, classification, and keys. Austral Nat. Univ., Research School of Biological Sciences, Canberra, Australia. [\$15 (A), L. Watson, Taxonomy Unit, Research School of Biological Sciences, A.N.U., G.P.O. Box 475, Canberra, A.C.T. 2601, Australia. 177 genera of Caesalpinioideae including the Swartzieae.]

YAKOVLEV. 1983. Review of "Advance of Legume Systematics" (Polhill and Raven, eds.). Bot. Zhur. 7.