

## Book reviews

**Fiechter, A. (Managing Editor): Journal of Biotechnology.** Amsterdam: Elsevier (Biomedical Division), year subscription 1985. \$ 92.25.

This new journal will be a survivor, that can already be predicted by the huge number of advertisements in only the first volume. It is intended to become a medium for the rapid publication of both full-length papers as well as short communications on various aspects of biotechnology. Also, new or potential applications of biotechnology in the field of molecular genetics, the biochemistry of viral, microbial, plant and animal cell systems, process development, computers automation and development of biosensors will be considered for publication. Together with a 26 member editorial board, the 6 editors-in-chief will try to publish papers of originality, high scientific standards and multidisciplinary interests. Issue no. 2 ends with Errata to Issue 1. The articles published up till now, an excellent mini review of immunoaffinity separation processes and other primary papers, as well as short notes, promise an interesting periodical of two volumes, each comprising 6 issues, per year.

H. F. Linskens, Nijmegen

**Scarpelli, E.M.; Cosmi, E.V. (eds.): Reviews in Perinatal Medicine, Vol. 5.** New York: Alan R. Liss 1984. 214 pp. £ 32,-.

In the most recent volume of this now bi-annually published review series, with a new publisher, there is one chapter which is particularly interesting: the contribution of John Leeton and Carl Woodon on in vitro fertilization of man. Since successful human pregnancy resulting from in vitro fertilization was first reported, this technique has developed very fast. Most of the success has been before 1983, achieved by four independently operating groups, two in Australia, one in both the UK and the USA. The review concentrates on the selection of patients and reports in detail on management, embryo-transfer and pregnancy. Counselling is considered to be very important for the patients. Current developments include the donor oocytes and embryo programme, management of idiopathy and male fertility, and the application of freeze-thawing embryos. Future prospects are directed towards the transfer of sexed embryos, embryo surgery, cloning, and the possibilities of genetic engineering.

The current success rate of each treatment ranges from 12 to 25% for each laparoscopy. It can be foreseen that further experience should improve the pregnancy rate, so that this technology may become useful in the treatment of male infertility and certain genetic abnormalities. It is beneficial that a short consideration of the ethics of in vitro fertilization is added.

H. F. Linskens, Nijmegen

**Makasheva, R.K.: The Pea (Russian Translation Series No. 16).** Rotterdam: Balkema. 276 pp., 18 figs., 19 tabs.

The monograph on the wide-spread grain legume, meant for plant breeders and agronomists, is a translation of a 1973 published book by Kolos Publishers, Leningrad. At that time it contained current information, but since that time much has been published about the pea, so that it must now be considered as being fairly out-of-date.

The volume presents the economical importance of the pea as well as botanical, genetical and technical data, some information on pests and diseases, and a taxonomical key for the varieties, covarieties and subvarieties. The bibliography is nearly exclusively Russian origin, even Gregor Mendel is not mentioned. A subject index is missed.

H. F. Linskens, Nijmegen

**Research Institute for Forestry and Landscape Planning "De Dorschkamp" Annual Report 1983.** 135 pp., 32 figs. (11 in color), 13 tabs.

The Dutch research institute of forestry and landscape planning, which also includes a division of breeding and propagation, is worthwhile to report about. It is under the direction of R. Koster and devoted to a broad spectrum of projects, which are described in this report in detail. There are 3 sections: breeding of broad leaves, conifers and elm. A central position takes the selection and breeding of various poplars, but alder, birch, oak, beech and *Notophagus* are also in the program. Among the conifers are scotch pine, Douglas fir, Norway spruce and Sitka, as well as larch, *Pinus nigra*, *P. contorta*, *P. strobus*, *P. banksiana*, and *Abies grandis*. Special attention is given to the vegetative propagation in vitro of *Pseudotsuga*, *Salix*, *Populus*, *Platanus*, *Ulmus*, *Alnus* and *Quercus*. Dutch elm diseases as well as resistance to fire blight of hawthorn are currently under investigation.

H. F. Linskens, Nijmegen

**Ayala, F.J.: Population and Evolutionary Genetics. A Primer.** Menlo Park, Reading, London, Amsterdam, Don Mills, Sydney: Benjamin Cummings 1982. xiii+268 pp., several figs., photographs and tabs.

This is an excellent introduction to evolutionary genetics. F. Ayala, a former student of the late Prof. Th. Dobzhansky, is not only an outstanding scientist but also a very good writer. After a short introduction to basic genetics the genetic structure of natural populations and the dynamic forces acting on their gene pools are discussed. Random mating, the Hardy-Weinberg law, mutation, migration, random processes, natural selection and inbreeding are treated in a brief but comprehensive manner. The mathematical formulations are simple and reduced to a minimum, yet full deductions are always given to make the conclusions transparent. The more complex evolutionary processes of coadaptation and geographic differentiation are discussed with a variety of practical examples. Organismic evolution depends on quantitative characters too and a separate chapter deals consequently with polygenic inheritance and the analysis of heritabilities. The speciation problem, macroevolution and the construction of dendrograms from molecular and other data are the topics of the last chapter. The book ends with an appendix on statistical methods and a glossary. It is impressive how clear and simple and yet on a high scientific level this book is written. It can be recommended to everybody who is interested in evolution and wants to learn about its genetic background.

D. Sperlich, Tübingen

**Schlosser, S. (ed.): Genresourcen für Forschung und Nutzung. Naturschutzarbeiten in den Bezirken Halle und Magdeburg. 19. Jg. Beiheft.** Institut für Landschaftsforschung und Naturschutz: Halle/Saale 1982. 96 pp. DM 2.-.

The preservation of wild plant species relevant for breeding and application in natural reserve areas is a new argument for protective measures.

The Academy of Agricultural Sciences of the GDR has initiated the compilation of such species and their potential use as food, and fodder material for vegetables, fruit, spices, drugs, as well as for recultivation and forest plantation. For all species an index of importance as a gene resource for research and breeding purposes is given. The variety of potential uses includes resistance breeding, as well as new starting materials for tissue culture, distance breeding and chemical exploitation. It is the extensively used permanent grasslands, which are substantially diminished habitats, that contain ecotypes of various grasses and clover species which will be essential for the breeding of forage plants.

It is the first time that a state unit has presented such an annotated list – it will be extremely important for the future.

H. F. Linskens, Nijmegen

**Wöhrmann, K.; Loeschcke, V.: Population Biology and Evolution.** Berlin, Heidelberg, New York, Tokyo: Springer 1984. xi + 270 pp., 74 figs. Hard bound DM 112.-.

The editors V. Loeschcke and K. Wöhrmann describe in the introduction of the book that "one of the major tasks of

contemporary population biologists" is to elucidate the relationship between the processes occurring at the phenotypic level with those occurring at the genotypic level. Concepts of the interaction between environment and the buffered feedback mechanisms of the genotype should be developed. This is certainly a very important statement but the collection of articles published in this book fulfill this expectation only to a limited degree. Without any doubt, some of the contributions can be highly recommended to the interested reader. Yet, a general solution of the problem is not visible. Population biology is a very complex field, and one must be satisfied when the interacting factors of special cases become sufficiently disentangled. There are 19 different articles in the book, arranged in seven chapters. The authors are well-known population biologists (e.g. W. Scharloo, A.M. Shapiro, A.J. van Noordwijk, T. Prout, W. van Delden, A. Seitz, P.D.N. Hebert, K. Wöhrmann, to name some of them) or theoreticians (e.g. S.C. Stearns, G. de Jong, K.P. Haderler, F.B. Christiansen, V. Loeschcke, S.D. Jayakar and others) and all the papers deal in one way or the other with genotype-environment interaction in animal or plant populations. It is impossible, however, to give a general overview since the variety of conceptions is too big. Students of practical and theoretical population biology are invited to go through the book themselves. Whatever their special field might be, they will find stimulating and interesting contributions written by highly competent scientists.

D. Sperlich, Tübingen

## Announcement

### Assinsel Grand Prize

The producers of new plant varieties belonging to Assinsel (Association Internationale des Sélectionneurs pour la Protection des obtentions Végétales) award a Grand Prize, every four years, to a scientist whose research work is capable of making a major contribution to the development of world agricultural or horticultural production.

The Grand Prize competition is open to all scientists who, through their basic or applied research work, have contributed towards improving methods and techniques of selecting and producing new plant varieties. It is open to researchers of all countries, universities, public breeding centres, international plant-breeding centres, gene banks, government agencies, etc., with the exception of personnel in commercial or other private companies involved in producing new plant varieties, which belong to Assinsel or to a company or association which is a member of Assinsel.

All scientific papers will be accepted, subject to the following conditions:

- all papers must be in French, English, German or Spanish;
- all papers must be typewritten or otherwise typeset;
- the work covered by the paper must not have been published prior to December 1, 1981;
- papers must be presented by a scientist in the applicant's country and/or accompanied by a brief résumé specifying the applicant's scientific training, the place of origin and detailed information on the progress of the work covered in the paper.

Scientific papers must be received no later than December, 1985, either at the Assinsel Secretariat-General, 5-7 Chemin du Reposoir, Nyon (Switzerland), Telephone (22) 61 99 77, Telex 22 776, or at any other Assinsel National Secretariat.

The Assinsel Prize carries a cash award of 5,000 Swiss francs. If there are several winners, this amount shall be evenly divided amongst them. The decision will be given widespread publicity in the international scientific community and in the international press.

The winner or winners will be invited to attend the Assinsel Conference, where the Prize will be officially awarded. Travel and accommodation will be provided free of charge.

In 1986, the Assinsel Conference will be held in San Francisco, California (United States) on May 30 and 31.

