conservation is to be mobilized when destruction of habitats has gone too far or in the case of island species whose natural environment has been irreversibly transformed by plant invasions and animal introductions. Our responsibility of keeping threatened species alive is emphasized. Maxted *et al.* review conservation strategies, listing systematically both *in situ* and *ex situ* approaches and evaluating their pros and cons. Twelve papers in Part II "Theory and practice of *in situ* conservation" constitute valuable scientific background to genetic conservation. The choice of target taxa is the first step and this issue is addressed in the paper by Maxted and Hawkes, who consider scientifically and economically relevant principles of assessing the value of a species. The important message is that conservationists will always have to prioritize and select taxa to be actively conserved. Further step, *i.e* the assessment of areas and habitats that are likely to contain genetic diversity of the taxon should be based on ecogeographic surveys, and the chapter by Maxted and Guarino reviews the methods which can be used to select such regions. Williams highlights existing technical and political constraints to reserve placements. One of the key chapters was written by Lawrence and Marshall. They provide us with an outline of the population genetics theory and its relevance to the conservation of genetic diversity. Gillman's review of population ecological dynamics completes the mosaic of issues forming the necessary scientific background of *in situ* conservation. Among other chapters in this sections are those devoted to reserve management, estimation of genetic diversity or plant-insect relations. Section III consists of case studies on conservation of diversity in various parts of the world, including Israel, Turkey, Indonesia, Ethiopia, Peru or Central Asia. This part is particularly interesting as it confronts the "state of the art" in various regions of the globe. Overall conclusions concern practical application of conservation strategies. Maxted *et al.* present a practical model for *in situ* genetic conservation. Two distinct *in situ* techniques are defined. The former, *i.e.* "genetic reserve conservation" consists of location, management and monitoring of genetic diversity in natural wild population within defined areas designated for active, long-term conservation. The latter, so-called "on-farm conservation" is defined as sustainable management of genetic diversity of locally developed traditional crop varieties with associated wild and weedy species, practised by farmers who use traditional cultivation systems. Both approaches are complementary. Future venues are outlined in the concluding contribution by Hawtin and Hodgkin.

Plant genetic conservation is a book which makes an important step to goals that can only be achieved by multidisciplinary approaches. It is a solid contribution to the global biodiversity problem, to its description, understanding, and even better, to its solution.

P. PYŠEK (*Průhonice*)

Page, C.N.: **The Ferns of Britain and Ireland, 2nd Edition**. - Cambridge University Press, Cambridge 1997. 540 pp. ISBN 0-521-58658-5.

After fifteen years from the first edition, an enlarged 2nd edition of Page's work about pteridophytes of Britain and Ireland has been published. The book reflects the author's broad experience with this group of plants. The book compiles results of author's own intensive research as well as results of his collaboration with other specialists. Main emphasis is given on the determination and information about the distribution and ecology of the treated taxa in the region.

The book has been elaborated in a slightly non-traditional way. It has been compiled as a well-arranged determination tool, however, it does not contain the classical dichotomous key to identify a particular taxon. Using six determination diagrams plant specimens can easily be sorted into groups of taxa, or directly determined to generic or even specific levels. To a preliminary determination a multi-access key can also be used, where conspicuous morphological and ecological characters refer to corresponding lists of species and hybrids. The final determination is achieved when specimens are compared with text characteristics of particular taxa referred to from the diagrams and with the pictures. Such an approach is justified especially in the difficult taxa and in groups of frequent occurrence of hybrids to which pteridophytes surely belong.

Introductory chapters (46 pages) include information about the botanical subdivision of Britain and Ireland (2 maps). Altitudinal distribution of species is ordered in a table and a map of altitudinal zonation of the region is provided. A series of 16 maps shows important environmental factors influencing the distribution of pteridophytes. Most maps provide climatological factors (such as winter and summer mean temperatures, and distribution of average annual rainfall). A simplified geological map, a map of different maximum extents of southern ice limit during the Pleistocene era, along with a map of SO_2 concentration over Britain is included.

The main part of the book treats in the alphabetical order 67 species and 35 hybrids. With the name of a particular taxon the most frequently used synonyms are given. The following text contains a "preliminary recognition" which is a brief summary of the principal features, and "occurrence" describing very generally the geography, habitats, and frequency of occurrence of the species. A large "identification" paragraph describes the taxon in details and gives taxonomically distinctive features which differentiate the taxon from other closely related taxa. For a better orientation the major characteristics are italicized. The next "variation" paragraph deals with the variability of the taxon and "possible confusion" indicates taxa where confusion is possible. "Technical confirmation" gives details at the microscopic level such as the number of chromosomes, distinctive features of spores, sporangia, epidermis, *etc.* The last paragraph "field notes" completes the information about the geographic range of the taxon and ecological requirements, in most taxa associated species are given. Small inset maps showing the distribution in the region are provided for all species and hybrids (104 taxa), for 23 species maps of their European distribution are included, and for 64 taxa phenological events of their annual cycle are indicated in small graphs. Valuable are silhouette illustrations (161) which authentically outline variable shapes of leaves and leaflets in various phases of ontogeny. These illustrations are complemented by drawings (22) of the plant habit and by pen-and-ink drawings (55) showing the main features (especially leaves of young plants, sporangia in *Polypodium*, details of leaf-sheaths, stems, cross-sections of stems in horsetails, *etc.*). There are 55 black-and-white photographs of plants (habit, leaves, details of leaflets, leaf-sheaths, fertile shoots with cones in horsetails, *etc.*) and their habitats. The bibliography section contains especially new English-written studies, and to this list has been added many papers published after the first edition of the book.

Valuable contributions are treatments at the subspecific level of many species (*e.g. Asplenium adiantum-nigrum*, *A. trichomanes*, *Dryopteris affinis*). Very well worked up is the genus *Pteridium* where the author has recognized two species (*Pteridium aquilinum* and recently by himself described *P. pinetorum*), moreover, three and two subspecies are described in the two taxa, respectively. In details have been treated the group of *Polypodium vulgare*, and locally found hybrids in genera such as *Asplenium*, *Dryopteris*, *Polypodium*, *Polystichum*, *Equisetum*, *Asplenophyllitis*, *etc.*

The author's main goal was to prepare a high quality determination tool and this has been fully accomplished. It is a pity that the book does not contain an overview of higher taxonomic levels. The alphabetical ordering of taxa enables a quick orientation in the text, however, a short review of the phylogeny of pteridophytes would be desirable. Also the problematic nomenclature of taxa could have been discussed in more details. Full reference of published names of taxa and a list of synonyms would provide much more complete information useful for specialists. Central-European localities of several taxa (*e.g. Isoëtes lacustris*, *I. echinospora*, *Selaginella selaginoides*) are missing from the distributional maps. Illustrations of surface sculpturing of spores in *Isoëtes* would ease their determination.

The book is a well arranged and complex determination tool, and will provide a valuable information to all who are interested in the fields of botany and nature conservation. It can be used not only in the regions of Britain and Ireland, but will be very helpful also in other parts of Europe because the range of most of the treated taxa covers a substantial part of the continent.

P. HAVLÍČEK (*Praha*)