Book Reviews


Although published two years ago and received only recently, this volume warrants the attention of Actinomycetales systematists. Many new taxa are described and only a massive teamwork effort could have led to this publication. The first 125 pages cover general information on Actinomycetales, ranging from comments on cultural characteristics to chromatography of pigments. The remainder of the volume is reminiscent of Bergey’s Manual of Determinative Bacteriology and includes descriptions of many new taxa. There are 21 pages of references to the literature (set up in the curious format wherein most, but not all, Russian authors are listed first). Also, there is an index to the genera (68) and species and subspecific epithets considered. At least 289 new species or new subspecies are described! Actinoplanales appears as a new order; Streptosporangiaceae and Planosporaceae as new families; and Microtermospora (sic, probably a lapsus calami), Proactinoplanes, and Microsporangium as new genera. In addition, Professor Krasil’nikov has proposed many new combinations for taxa originally described as species of Streptomycies Waksman and Henrici. Thus, the confusing double nomenclature for members of this genus continues.

Hopefully, this volume can be translated into English before too long. Its full scientific content will remain unknown until that time. And, hopefully, Professor Krasil’nikov and his associates will make the type strains of each of the new taxa described available to the scientific community. The material in this volume should necessarily be included for consideration for the ninth edition of Bergey’s Manual. Availability of the cultures would be of inestimable value in this regard.

Thomas G. Pridham
Head, ARS Culture Collection
ARS Culture Collection Investigations
Fermentation Laboratory
Northern Regional Research Laboratory
Peoria, Illinois 61604 USA


In 1966, the World Federation of Culture Collections, then the Section on Culture Collections, of the International Association of Microbiological Societies began an ambitious three-phase program: (1) a survey of collections maintaining cultures of microorganisms; (2) a listing of the names of species held in these collections; and (3) a catalogue of the information recorded in each collection on the species listed. This volume gives the information collected in phases 1 and 2.

The names and addresses of 329 collections in 52 countries are given, along with the names of the directors, information on staff, main interests, numbers of cultures held, and their availability. Collections are numbered arbitrarily and listed numerically. Indexes provide access by country, main groups of organisms, and main interests. A list of personnel is also included.

Although the listing is by no means complete, it seems to include the main large collections and many specialized holdings. A few of the entries give little information on the organisms in the collections (and some collections do not distribute cultures); whether these should be included could be questioned. While addresses should be given in the original language as far as is feasible, there should be some conformity; English equivalents are given for most countries, except Italia and Brasil; German collections appear as from Germany, Federal Republic of Germany, and Bundesrepublik Deutschland, and from German Democratic Republic and Deutsche Demokratische Republik.

The last two-thirds of the volume contains the lists of species maintained (phase 2 of the project). These are grouped as Algae, Bacteria, Fungi, Yeasts, Lichens, Protozoa, Tissue Cultures, and Animal, Bacterial, Insect, and Plant Viruses. Each is prefaced by notes indicating the editor(s) of the list and special problems encountered.

The scientific names are those received, with cross references between the usually accepted name and its synonyms (no synonyms given for lichens and protozoa). In the bacteria, the nomenclatural status has been checked with
Index Bergeyana, and a bibliography of nomenclatural references is included. In the fungi, many of the names received referred to different states of the same fungus; here a list of alternate names is provided. Animal viruses are listed under the generic names recommended by the International Committee on Nomenclature of Viruses, along with the common names and host names. Other viruses are listed by common name and host. While tissue cultures are hardly microorganisms, they are used by microbiologists, and three collections maintain cell lines.

The prefatory material is presented in English, French, German, Russian, Spanish, and Japanese. While the use of carefully checked translations of the original questionnaires may be desirable so that the required information is obtained, the need for using other than English in a book of this kind is doubtful. One wonders whether the return from two collections in the USSR justifies the translation of the questionnaire into Russian, although there may be other reasons for the poor response.

This (presumably) first edition should convince other collections to register with the World Federation. Whether all that register should be listed in subsequent editions is questionable, and minimal standards for inclusion should be laid down. One of these would be the adoption by all accepted collections of a standard classification and taxonomy. For bacteria and viruses, this could be based on the recommendations of the International Committee on Systemic Bacteriology and the International Committee on Nomenclature of Viruses. Unfortunately, as yet, agreement within a specialized subcommittee is not always possible. Now that the blue-green "algae" are accepted as bacteria, they too may come within the purview of the ICSB.

I am amazed at the omission of the well-known sigla by which culture collections are usually designated, such as ATCC, NCTC, and NRRL; ATCC appears only in the designation of tissue culture lines, e.g., ATCC CCL3. This may be because I had been puzzling over four sigla and hoped the new listing would tell me whether they applied to two or more collections. Perhaps future editions will include officially recognized sigla in the interest of established custom and for those who prefer a few meaningful letters to meaningless numbers.

The volume is timely in that it anticipated the recommendation of the Stockholm Conference on the Environment that gene pools, particularly of microorganisms, should be preserved. This reiterated a resolution of the UNESCO General Assembly in the mid '60s that culture collections of microorganisms were essential to the study of microorganisms and should be fostered; this book is in fact the first tangible result of that resolution and the continued interest of UNESCO in culture collections. It is thus a source book for those interested in implementing the suggestions of the Stockholm conference, for curators of collections, and for microbiologists interested in sources of cultures. While the volume does not replace the detailed catalogues of the large collections, it will be useful for those seeking cultures as close to home as possible and to those looking for a wide range of cultures for comparative purposes.

N. E. Gibbons
64 Fuller St.
Ottawa, Canada