内蒙古植物志

第一卷

内蒙古人民出版社

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FLORA INTRAMONGOLICA

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TYPIS INTRAMONGOLICAE POPULARIS
1985·HUHHOT

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说　　明

本志是系统地记载内蒙古自治区野生和习见栽培的维管束植物的书籍，共分八卷出版。第一卷包括蕨类植物、裸子植物及被子植物从金粟兰科至马兜铃科；第二卷从蓼科至十字花科；第三卷从景天科至豆科；第四卷从酢浆草科至山茱萸科；第五卷从鹿蹄草科至桔梗科；第六卷为菊科；第七卷从香蒲科至禾本科；第八卷从莎草科至兰科。本志科的顺序采用下列系统：蕨类植物按秦仁昌（1978）的系统，裸子植物按郑万钧《中国植物志》第七卷的系统，被子植物按恩格勒（1936）的系统（有某些修正）。

第一卷前面有序言、前言和内蒙古植物区系概况，附“内蒙古植物分区图”，还收载了本区维管束植物30科，59属，166种，25变种，3变型。其中蕨类植物17科，27属，45种，8变种；裸子植物3科，7属，24种，1变种；被子植物10科，25属，88种，16变种，3变型。并附图版83幅。内容有科、属、种的中名、拉丁名、特征记述和各级的检索表，对每个种有蒙古名、主要文献引证、生态生物学特性、产地、分布、经济用途和插图。在卷末附有新种记载、植物的中、蒙名与拉丁名的索引。

本卷由内蒙古大学马毓泉、刘钟龄、雍世鹏、吴庆如、赵一之、刘书润、白学良，内蒙古农牧学院富象乾，内蒙古师范大学音扎布，内蒙古林学院孙岱阳、马恩伟、周世权，内蒙古林业科学院童成仁，乌兰察布盟科委朱宗元等同志参加编写。另外内蒙古大学赵一之、刘书润参加了生态生物学特性及分布部分的编审工作；内蒙古医学院朱亚民、罗布桑，内蒙古药品检验所徐嫦参加了药用植物药效部分的编审工作；中国农业科学院草原研究所陈山、蒋尤泉参加了牧草饲用评价部分的编审工作；内蒙古师范大学音扎布，内蒙古畜牧科学院温都苏参加植物种的蒙名拟定工作；内蒙古医学院杜文华参加了新种记载拉丁文的审校工作；内蒙古大学弓耀明参加了英文翻译工作。

在本卷编写过程中，承蒙中国科学院植物研究所、林业土壤研究所、中国林业科学院、东北林学院等单位大力协助；中国科学院植物研究所邢公侠审阅蕨类植物稿，林业土壤研究所方振富审阅部分柳属稿，内蒙古大学外语系外籍教师 Kevin Stuard 博士审阅英文译稿，特向以上单位与个人致以衷心的感谢。

由于我们的业务水平有限，不妥之处敬请读者指正。

序　言

《内蒙古植物志》自从1977年开始出版以来，经过该志编辑委员会全体编著者共同努力，已于今年年底全部交稿，明年即可全部出版。全书共八卷，总计约四百多万字，附图版共1036幅，系统记载了内蒙古自治区所产几乎全部维管束植物共131科、660属、2167种。内容丰富，图文并茂，这是我国植物科学中一项重要科研成果，值得庆祝！

特别应该指出的是《内蒙古植物志》为祖国边疆少数民族地区的科学文化宝库，增加了崭新的内容，它为合理开发利用边疆植物资源，发展农、林、牧业生产和改善环境事业，提供了基础科学资料，同时为提高植物教学科研水平，对于进一步研究亚洲大陆的植物区系和植物地理具有十分重要的学术意义。

我国自解放以后，由于党和国家对于科学事业的重视，自1959年起在中国科学院的领导和支持下，组织全国植物分类学工作者共同协作，开始编写《中国植物志》，由于工作量大，至今已完成初稿及出版的志书，仅到全书80卷的一半，尚须继续数年努力，始能全部完成任务。至于各省（区）市植物志的编写则由各省（区）市分别进行，先后有广州植物志、海南植物志、东北木本植物图志、东北草本植物志、秦岭植物志、北京植物志，以及江苏、湖北、四川、云南、贵州、西藏、广西、河北等省（区）植物志，但到今年除海南植物志、江苏植物志和北京植物志等三部出齐以外，其余各省志书大部分尚在编写或付印中。试就各省（区）地方植物志出版情况比较，《内蒙古植物志》的完成，不论在速度上和质量上，都占着优先的地位。

这些成就应归功于内蒙古自治区党委和科委领导的亲切关怀与大力支持，归功于内蒙古十多所大专院校和农、林、医、畜等科研单位的科学工作者积极参加和团结协作，其中特别是内蒙古大学生物系在组织协调和规划设计等方面起了十分重要的带头作用，才保证了编写工作的顺利进行，按期完成了全书的编写任务。

这部植物志具有许多优点和特点，值得提出的是：其一，注意发扬地区的特色，如在每一种植物下的蒙语名称、地方别名，以及在本区的生态环境、生态特性等都进行了准确和详细的描述。其二，注意调查植物的经济价值，如药材、牧草、饲料、林木、薪炭、蔬菜、果树以及轻工业原料等方面的利用，都进行了简要的记载和评价。其三，所有科、属、种的描写均能简明扼要，通俗易懂，检索表采用显明性状，便于鉴定。这样志书将对普及植物分类学知识，解决植物命名问题，起到良好的推动作用。

当然不容讳言，由于历史的原因，本书所出八卷在编写规格和图文质量，先后各卷尚有不一致的缺陷。例如1979年起中央决定恢复内蒙古自治区1969年以前的行政区划范围，植物志的产地分布应把东四盟和阿拉善盟的全部种类收容进来，特别对先出的二、

三、四卷，必须增订。早期有些种类遗漏者，有些图版插图不完善者和有些未曾引用原始文献者，都可藉再版机会补充修正，力求全书的统一与完整。又在八卷之后，建议增编全书的科名、属名和种名的总索引，以便植物学工作者检查利用。

总之，《内蒙古植物志》是一部成功的科学著作，具有许多优点和特点，值得我们从事植物分类学工作者学习和借鉴。祝贺之余，特表敬意！

中国植物志编委会主编

俞德浚

1984年12月20日

PREFACE

"Flora Intramongolica" will be completed by the end of 1984 and published in its entirety by the end of 1985. This will mark the end of a nine year effort that began in 1977. It is the result of common efforts on the part of all writers of the compiling commission. The Flora consists of eight volumes, over four millions words with 1036 plates of line drawings. The Flora records systematically nearly all vascular plants found in Inner Mongolia Autonomous Region. They belong to 131 families, 660 genera and 2167 species. The contents are written well, contain high quality illustrations, and informations, which make the Flora is an important achivement in the botanical scientific research efforts of China, it is worth to be complimented!

It should be emphatically noted that "Flora Intramonogolica" adds new knowledge to the scientific and cultural treasure-house of border areas inhabited by minority nationalities and supplies basic scientific materials for rationally utilizing plant resources of the remote border provinces areas, developing production of agriculture, forestry and animal husbandry and improving the cause of environmental protection as well. It also has very important academic contributions to make in enhancing the level of teaching and research in the field of botany and further studying the flora and phytogeography of East Asia.

After Liberation, the Party and government paid a great deal of attention to scientific endeavours. This support, in conjunction with the leadership and support of the Chinese Academy of Science, allowed us to organize extensive cooperation among plant taxonomic workers throughout China in order to begin to compile "Flora Reipublicae Popularis Sinicae" in 1959. Up to the present time, the volumes which have been finished in first draft form and published formally only cover one half of all of the China Flora (eighty volumes are projected). It is necessary that we should continue to work hard in the next few years so that a publication of the whole Flora can be completed. The complication of local Floras of every area (Province, autonomous region and city) is undertaken by their own areas. Many areas of our country have successively begun to compile their own Floras. They are listed as follows:

"Flora Guangzhouensis", "Flora Hainanica", "Illustratio Plantarum Lignosarum Chinae Boreali-Orientalis", "Flora Plantarum Herbacearum Chinae Boreali-Orientalis", "Flora Tsinlingensis", "Flora Beijingensis", "Flora Jiangsuensis", "Flora Hupehensis", "Flora Sichuanica", "Flora Yunnanica", "Flora Guizhouensis", "Flora Xizangica", "Flora Guangziensis", "Flora Hebeiensis" etc. However, until this year, only "Flora Hainanica", "Flora Jiangsuensis" and "Flora Beijingensis" have been published in its entirety. The local Floras of the other areas are being compiled or are in the process of being printed. In comparion with other areas, the completion of "Flora Intramongolica" has been done with an admirable degree of speed and is of admirable quality.

This commendable effort is due to the concern and support of the leaders of the Scientific and Technological Commission of the Inner Mongolia Autonomous Region, also to the active participation and warm coop eration of the scientific workers in botany from more than ten higher universities, colleges and institutes of agriculture, forestry, medicine and animal husbandry and others in Inner Mongolia. Special recognition should be given to the Biology Department of Inner Mongolia University for making a very important contribution in organizing, harmonizing, planning and designing this effort. They led to the smooth compiling of the Flora and aided the publication of the Flora in good time.

The Flora is imbued with many merits and unique characteristics, among which the following aspects are worth mentioning. 1. It pays special attention to unique local characteristics. For example, for each species, it gives accurate and detailed records of the Mongolian name, local name and nature environment, and ecological characteristics. 2. It takes notice of economic values of the plants. For example, it makes brief evaluations of the use value of various plants for crude drugs, fodder, woods, firewood, vegetables, fruits, raw matrials for light industry, and so on. 3. It is brief and concise, and all descriptions are easily understood in terms of family, genus and species, This is helped by the adoption of obvious characters in the keys. As a result of this clarity, the Flora will play a role in popularizing knowledge of plant taxonomy and solving problems of plant nomenclature.

Of course, eight volumes may possess some sections which are in disagreement in the style of compiling and the quality of drawing and writing. For instance, in 1979, the Central government decided to re-

view the administrative division of Inner Mongolia Autonomous Region as made before 1969, so the areas of plant occurrence and distribution ranges should include all species in the four leagues of eastern Inner Mongolia and the Alashan league of western Inner Mongolia where were included in other provinces before 1969. Consequently, volumes 2, 3, and 4 should be revised and enlarged. Also, there are cases where certain species were omitted in early volumes, some illustrations could be improved and in some cases the original literature sources were not cited. When the opportunity arrives these inperfections should be corrected. It is also suggested that a general index for latin names of family, genus and species should be supplemented after the eight volumes being published, so that botanical workers will be able to find their desired informations more quickly.

In a word, "Flora Intramongolica" is a successful scientific work with many advantages and unique characteristics. It is worth emulating and using as a reference work for plant taxonomic workers. Many thanks for completing the Flora and we congratulate its publication!

Yu Te-tsun
Chief Editor of Compiling Commission
of "Flora Reipublicae Popularis Sinicae",
Academia Sinica, Beijing.

Dec. 20, 1984

前　言

内蒙古自治区跨越了亚洲东部与中部的湿润、半湿润、半干旱及干旱地区，既包括蒙古高原的一大部分，又占有松辽平原的西部和冀北山地、黄土高原的北部边缘。地理环境复杂多样，自然历史也经历了沧桑巨变，所以植物区系组成十分复杂，并且具有不少独特的成分。因此研究内蒙古植物区系对于全面阐明亚洲中部及东亚植物区系历史和地理规律，具有重要的意义。本书编写的目的，一方面是为研究内蒙古植物区系奠定基础，另一方面为生产和建设事业提供科学资料。

1957年，我国著名植物学家李继侗教授来内蒙古大学工作，并兼任内蒙古科委副主任。他提出了“团结全区植物分类学工作者，大量采集植物标本，深入研究植物资源，编写内蒙古植物志”的创议。在这个创议下，1959年内蒙古科委把“普查全区的野生植物，并完成全区植物志的编写”列入了重要的科研课题。二十年来，我区植物学工作者作了大量的编写植物志的基础工作。

1976年在内蒙古自治区党委的关怀和在内蒙古科委的直接领导下组织了内蒙古植物志编写组，更深入地开展了对内蒙古植物区系资源的研究工作，并开始了本志的编写工作。为了研究与编写工作的方便，1978年又设立了审定组，1981年又正式成立了内蒙古植物志编辑委员会，并挂靠在内蒙古大学。参加内蒙古植物志编写的单位有：内蒙古大学、内蒙古农牧学院、中国农业科学院草原研究所、内蒙古师范大学、内蒙古林学院、内蒙古医学院、内蒙古药品检验所、内蒙古畜牧科学院、内蒙古林业科学院、内蒙古果树研究所、乌兰察布盟科委、包头医学院、包头师专、包头市药品检验所、土默特左旗大青山林场等单位。同时，内蒙古人民出版社及该社汉文科技编辑室，对本志的编辑加工安排出版等方面也给予了很大支持和帮助。

综上所述，由于全体有关人员的共同努力，由１９７６年开始至１９８４年为止，历时９年，《内蒙古植物志》已按照预订计划完成，并分卷陆续出版。全书共分８卷，总字数计４００万，包括内蒙古产的维管束植物１３１科、６６０属、２１６７种。编绘插画１０３６幅。在进行植物分类研究的过程中，发现并初次发表了新属１、新种34新亚种２、新变种３０，为植物分类和植物区系的研究提供了新资料。

我们在编写过程中曾得到国内许多研究部门和高等院校的帮助支持，如中国科学院植物研究所、沈阳林业土壤研究所、兰州沙漠研究所、昆明植物研究所、华南植物研究所、江苏植物研究所、武汉植物研究所、西北植物研究所、西北高原生物研究所、北京大学、南京大学、四川大学、兰州大学、华东师范大学、东北林学院、西北师范学院等单位和专家均给予大力帮助，为我们提供图书资料和标本，解决疑难问题，审阅稿件

等，在此一并致以衷心的感谢。

还有，我国著名植物分类学家秦仁昌教授、美国麻省哈佛大学胡秀英教授和瑞士巴塞尔大学T.Reichstein教授以及其他国内外知名专家，对本志的编写工作，也给予了热情地支持和鼓励，使我们深受鼓舞。再者，瑞士日内瓦植物园图书馆，曾与我们建立了长期的资料交换关系，为本志的编写和研究提供了许多文献资料，日本东京大学植物标本室借用有关珍贵的模式标本，谨此致谢。此外，莎希荣同志代表内蒙古科委参加了本志第一卷和第五至八卷的审定、组织领导与管理工作，表示谢意。

应当申明，本志尚存在一些缺点和不足。首先是本志所包括的植物种类和植物种的分布区，均以行政区划为准，这是不够妥当的。前期出版的二、三、四卷，由于当时行政区划的变动，以致未能将本区东部四个盟，西部一个盟的植物种或某些种的分布区包括在内，有待增订。其次本志的二、三、四卷，由于当时编写受到历史条件的限制，没有把文献引证编入书内，个别种因而考证不足，在种的鉴定上也存在一些问题。此外，这样一部集体性的著作，由于水平所限，错误和不足定是难免，我们真诚地希望读者不吝指正，以便再版时改正和补充。

内蒙古植物志编辑委员会

Introduction

Inner Mongolia (Nei Mongol) Autonomous Region strides across the moist, semi-moist, arid, semi-arid region of eastern and central Asia. It includes not only most of the Mongolia Plateau but also occupies the western part of the Songliao Plain and northern Hopei Mountain Fields as well as the nortern frontier of the Loess Plateau. The geographical environments are complex and diverse. The history of natural development in this region has gone through many remarkable changes, so that the contents of geographical floral elements are very complicated and contain many endemic elements. Therefore, it has important significance to research on Inner Mongolia flora. It should aid in our understanding more clearly the floral development history and geographical regularities of the centre and eastern parts of Asia. The purpose of compiling this series of books is twofold: (1) to lay the foundations for research on Inner Mongolia flora and (2) to provide scientific information for production.

In 1957, Chinese botanist, Prof. Li Chi-tung came to work in Inner Mongolia and was concurrently vice-president of Inner Mongolia University and vice-director of the Inner Mongolia Scientific and Technological Commission. He pointed out the important significance of studying the Inner Mongolia flora. He wished to unite all plant taxonomic workers in Inner Mongolia Autonomous Region, to collect plant specimens in great quantities, to study in detail economic plants and to make preparation for compiling a comprehensive Flora Intramongolica. According to his suggestion, 1959 "General Survey of Wild Plants of Whole Region and Compilation of Flora of This Region" was listed as an important topic of scientific research by Inner Mongolia Scientific and Technological Commission. Over the past twenty years, Inner Mongolia botanical workers have done much fundamental work for the compiling of the Flora.

In 1976, with the support of the Inner Mongolia Committee of the Communist Party of China and the leadership of the Inner Mongolia Scientific and Technological Commission, a group for compiling "Flora

Intramongolica" was organized. Two years later, an examining group was established and in 1981, the Compiling Commission of "Flora Intramongolica" was formally created with Inner Mongolia Universtity being entrusted as a holding unit. Other units taking part in the compilation were, Inner Mongolia Agriculture and Animal Husbandry College, Institute of Grassland Research of Academy of Agricultural Science of China, Inner Mongolia Teacher's University, Inner Mongolia Forestry College, Inner Mongolia Medical College, Inner Mongolia Municipal Drug Bureau, Inner Mongolia Academy of Forestry, Inner Mongolia Institute of Fruit Trees, Wumeng Scientific and Technological Commission, Baotou Medical College, Baotou Teacher's Training School, Tumotezuoqi Daqingshan Tree Farm and others. Meanwhile, the Inner Mongolia People's Press and Editing office for Science and Technology of Chinese section of the press provided much support for the publication of the Flora.

With the common efforts of all members, over nine years (from 1976-1984) "Flora Intramonogolica" has been completed on schedule and has been published sequentially in eight volumes consisting of some four million words. The books include sections on vascular plants occuring in Inner Mongolia (131 families, 660 genera and 2167 species) as well as 1036 illustrations. In doing the work for this publication, we discovered for the first time, and published information about one new genus, thirty four new species, two new subspecies and thirty new varieties.

During the course of compiling Inner Mongolia Flora, we are grateful to many domestic units and specialists for supplying literature, information, precious specimens, solving knotty problems, and examining contributions. These units are as follows, Institute of Botany, Academia Sinica; Institute of Forestry and pedology, Academia Sinica; Lanzhou Institute of Desert Research, Academia Sinica; Kunming Institute of Botany, Academia Sinica; South China Institute of Botany, Academia Sinica; North-western Institute of Botany, Academia Sinica; North-Western Plateau Institute of Biology, Academia Sinica; Beijing University; Nanjing University; Sichuan University; Lanzhou University; East China Normal University; North-Eastern Forestry Institute and North-Western Teacher's College.

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rtunity to express our deep appreciation for the help from the Library of the"Conservatoire et Jardin botaniques",Geneve,Switzerland,for establishing an exchange of books and articles for a long period of time and supplying a great deal of extremely useful information that would have been difficult to find elsewhere.We would also like to thank the Herbarium of the Botanical Gardens,University of Tokyo, Japan,for providing many rare type specimens.

It should be said that there are some deficiencies and defects in the Flora. First, plant species detailed and their distribution ranges were wholly based on the criteria of administrative division. This treatment is at times, not appropriate. Volumes 2,3, and 4, which were published earlier did not include the species and their ranges found only in the four Leagues of eastern Inner Mongolia and the one league of western Inner Mongolia. This problem remains to be corrected. Secondly,a section listing literature cited hasn't been included in volumes 2,3 and 4 of the Flora owing to the limitation of historic conditions at the outset of compilation, thus a few species lacked detailed investigation and some problems existed in the identification of individual species. In addition, because of the limitations of some authors,it is inevitable that in such a collective work effort some mistakes and defects are bound to occur.Thus we genuinely encourage readers to send us their comments in order that we will be able to correct them in a second edition.

Compiling Commission of "Flora Intramongolica"

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