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Lichen Mapping in Europe

Proceedings of the First Meeting on Lichen Mapping in Europe held at Stuttgart from September, 22nd to 24th, 1989

Editors:

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Summary

This report presents lectures held at the First Meeting on Lichen Mapping in Europe at the State Museum of Natural History, Stuttgart. The papers deal with current state, plans and problems of lichen mapping in 22 European countries. Furthermore methods of data processing involved in lichen mapping are discussed. Recommendations for international cooperation in a future European lichen mapping project are given. An overview of the different regional mapping projects in Germany is presented.

Zusammenfassung

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Dieser Report enthält Vorträge, die während des ersten Symposiums über Flechtenkartierungen in Europa im Staatlichen Museum für Naturkunde Stuttgart gehalten wurden. Die Beiträge behandeln augenblicklichen Stand, Planungen und Probleme von Kartierungsprojekten in 22 europäischen Ländern. Ferner werden Methoden der elektronischen Verarbeitung von Kartierungsdaten besprochen. Die während der Tagung ausgearbeiteten Empfehlungen für eine zukünftige europaweite Rasterkartierung von Flechten werden mitgeteilt. Die verschiedenen regionalen Kartierungsprojekte in Deutschland werden in einem Überblick vorgestellt.

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Preface

From September 22nd to 24th 1989 lichenologists from 18 European states met in the buildings of the Staatliches Museum für Naturkunde (State Museum of Natural History) at Stuttgart to exchange information on current lichen mapping projects and to discuss about starting a lichen mapping project covering the whole of Europe. Regarding the political situation at that time it was a notable success to bring together participants from so many countries from all over Europe; several of our Eastern European colleagues were allowed to visit Germany for the first time.

Actually, the intensity of lichen mapping in the single European countries is rather different. Whereas floristic exploration is still restricted to regions around research centers or to lichen-rich localities in some countries, lichen mapping is being performed in a systematical manner elsewhere. In some cases data resulting from lichen mapping are already stored in and managed by computers and completed distribu-

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tion maps will be subjected to numerical analysis. The contributions to the meeting, compiled in this report, will serve to demonstrate the actual situation in the different countries.

Despite a still very unsatisfactory knowledge on the lichen flora of a few European regions, it may be time to think about how we can pave the way for a mapping project covering all of Europe. The differences in the degree of floristic exploration will probably turn out to have less negative consequences than many may be afraid of. Anyway, a preparation of distribution maps of lichens at a European level is bound to work only if it is based on scale grid maps with rather big grid units, a point that gained general agreement among the participants from the beginning.

Lichen flora is changing rapidly. Some parts of Europe suffer a change occurring in an alarmingly high speed. This fact ought to encourage the initation or intensification of national lichen mapping and the start of a European mapping project. Distribution maps yield precious informations on frequency and threat of lichens and will serve as an essential background for precautions to save threatened lichen species by nature protection in all European countries. Several contributions in this volume are proving the fact that the knowledge on lichen distribution is indispensable for a sound evaluation of nature and environment protection projects.

In early autumn 1989, when the meeting was held, the political revolutions in several Central and Eastern European countries were still in their dawn or even unimaginable. Nobody would have dared then to prognosticate the breath-taking speed of change in the overall situation in Europe that we are facing now. Chances for a paneuropean scientific cooperation surmounting political and former ideological boundaries have risen to a once unexpected level. Yet, anthropogenous effects endangering nature, especially air pollution, have never and will never stop at man made boundaries. May this judgement be shared by all political authorities and may it give further impetus to our mutual work and cooperation!

The gratitude of all participants of the meeting is due to the Ministerium für Umwelt, Naturschutz und Reaktorsicherheit (Bonn) (Ministry of Environment, Nature Protection and Nuclear Security) for financial support and to the director of the Staatliches Museum für Naturkunde Stuttgart, Prof. Dr. B. ZIEGLER, for placing the facilities of the museum at their disposal and for making the publication of this report possible. We are indebted to Mr. M. HEKLAU for his assistance in preparing the typescripts, to Dr. B. HERTING and Prof. Dr. T. NASH III for revising parts of the English text, and to Dr. W. SEEGER for his help in publishing this report.

> Stuttgart, May 1990 Volkmar Wirth and Hans Oberhollenzer

Lichen Mapping in Europe - Introduction

By Volkmar Wirth and Hans Oberhollenzer

The participants of this meeting are interested in plant geography, in the knowledge of lichen distribution and therefore in mapping of lichens. The major aim of lichen mapping projects is to achieve a better knowledge of the distribution areas of lichen species. This meeting has the task to support these efforts by the mutual exchange of informations on current projects, applied methods, aims and problems. Beyond this we should also be looking for possibilities to initiate lichen mapping at a European scale or at least seek for a standardization of European lichen maps yet to be published. Taken altogether a lot of precious information is at our disposal here.

More than twenty years ago, when British lichenologists started mapping their country and when one of us was mapping parts of SW-Germany, projects like these were isolated pioneer work and were commented with amazement. A realization of plans to publish a lichen distribution atlas of larger regions or even of whole countries seemed to be unimaginable.

In the meantime substantial increase in lichenological knowledge has been achieved. The number of lichenologists has multiplied. The enormous problems in the identification of species still present in the sixties have decreased considerably, in a degree younger lichenologists may hardly imagine. During the last two decades more and more data on lichen floristics have been accumulated and an increasing number of regional or national lichen mapping projects have been initiated.

Announcing this meeting one could be convinced that circumstances were in favour of it now. There was a growing need for more informations on current projects and future plans in the various countries and time had come to search for possibilities of initiating further national projects and a European lichen mapping project as it has already successfully been achieved with higher plants and bryophytes.

It is not necessary to outline the general scientific importance and significance of lichen mapping or lichen maps here. We would only like to mention that we should be able to give reasons to others, including laymen, why these mapping projects are desirable and why they urgently need realization. Considering the severe decline of many species and the bioindicative function of lichens, convincing arguments can be given.

Nowadays nature protection departments and authorities in several countries are rather susceptible for results of research on sensitive cryptogams, especially on lichens. This is also shown by the fact that this meeting gained ministerial sponsorship. At present lichens are appreciated on behalf of their sensitivity to air pollution, known even to laymen. Lichens are of great importance for purposes of bioindication and deserve consideration in the process of nature protection planning. For governmental authorities lichen mapping therefore has a very practical background beyond its pure scientific aspects. It is hence regarded more and more as useful and desirable.

We therefore have to be aware of an increasing public interest in lichens and we must use the chance now and try to promote lichen mapping on a regional as well as on a national and international scale. It is important to emphasize the significance of lichens as bioindicators and their importance for nature protection, the latter being too much restricted to higher plants. This meeting may thus help some of us to consolidate one's own position concerning relations to officials, or it may as well support a more successful further planning. Being able to refer to similar existing projects in other countries has proved to be very useful.

It was intended to invite representatives of as many countries as possible. Yet, there are several countries, e. g. Bulgaria, Greece, Portugal and Romania, from which at the moment no or little constructive contributions could be expected because lichenology there is still underdeveloped and receives little or no support. Taken altogether contributors from 18 countries, representing 22 countries, present valuable informations on the current status of lichen mapping. Thus a hitherto unachieved complete overview is presented here.

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