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REPORT ON
THE FIFTH GENERAL ASSEMBLY OF THE
PAN-AMERICAN INSTITUTE OF GEOGRAPHY AND HISTORY
WITH SPECIAL REFERENCE TO THE ACTIVITIES OF THE
SECOND CONSULTATION ON GEOGRAPHY
OF THE COMMISSION ON GEOGRAPHY

By

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Department of Mines and Technical Surveys
Ottawa
1950

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This is a report prepared by H. L. Nicholson, covering his attendance at a conference called the Fifth Assembly of the Pan-American Institute of Geography and History, held at Santiago, Chile, from October 16th to October 27th, 1930. The author's period of absence from his duties covered fifteen days and his attendance at the conference cost approximately \$1,320.

The work of the Institute is carried out by three commissions. A commission on cartography, a commission on geography and a commission on history. The three commissions meet together at each general assembly and separately during the intervening years.

The Objectives of the Conference and the Subjects Under Discussion

The Fifth General Assembly had on its agenda subjects of an administrative and fiscal nature, while the meetings of the commissions were to consider technical matters and future programmes in each of the three substantive fields.

The Organizations Represented and the Personnel in Attendance

Canada and nineteen of the twenty-one American republics were represented at the Assembly. The national delegations varied in size from 37 persons, as in the case of the United States of America, to one person, as in the case of some central American republics. Colombia, Nicaragua, Paraguay, Dominican Republic and Salvador were represented by members of their diplomatic staff to Chile only. Venezuela and Panama had no representation whatsoever. Not every state sent technical delegates to each one of the three commissions, as the following table shows:

| | Cartography | Geography | History | Diplomatic Representatives only |
|--------------------|-------------|-----------|---------|---------------------------------------|
| Argentina | X | X | X | |
| Bolivia | X | X | X | |
| Brazil | X | X | X | |
| Canada | X | X | | |
| Chile | X | X | X | |
| Colombia | | | | X |
| Costa Rica | X | | | |
| Cuba | X | X | X | |
| Dominican Republic | | | | X |
| Ecuador | X | X | X | |
| Guatemala | X | | | |
| Haiti | | | X | |
| Honduras | X | X | | |
| Mexico | X | X | X | |
| Nicaragua | | | | X |
| Panama | | | | |
| Paraguay | | | | X |
| Peru | X | | | |
| Salvador | | | | X |
| United States | X | X | X | |
| Uruguay | X | X | | |
| Venezuela | | | | |

In addition there were "professional delegates" and observers from a large number of institutions and organisations which are listed in Appendix I.

The head of each nation delegation was expected to speak for the country concerned at the plenary sessions of the Institute. The head of each delegation was, in addition, usually the national representative on one of the three commissions of the Institute.

In the case of Canada, Mr. W. M. Miller was head of the delegation as well as being Canada's representative on the Commission on Cartography. The author was the remaining delegate from Canada and was the substitute representative on the Commission on Geography, in place of Dr. J. W. Watson.

Since the head of the Canadian delegation was the official representative of Canada at the plenary sessions of the whole Institute, as well as at the meetings of the Commission on Cartography, the remainder of this report will be confined to the activities of the Commission on Geography.

The Commission on Geography

The programme outline of the conference is attached as Appendix II. The work of the Commission on Geography was carried out in plenary sessions of the commission and in four sections. At the first plenary session, each national delegate on geography (or the head of the delegation on geography in the case of the United States of America, Brazil, Chile and Argentina) presented a report on the geographical activities in his country since 1949. The report presented for Canada is attached as Appendix III.

The five sections of the Commission on Geography were as follows:

1. Physical geography and biogeography
2. Human geography
3. Regional geography
4. Methodology and teaching
5. Geography of the Americas

The author attended all of the meetings on geography, plenary and sectional, except when two sections met at the same time then preference was given to sections 1, 2 and 3. In addition, whenever possible, he attended the meetings of the section on special maps of the Commission on Cartography and prepared a report on the Atlas of Canada for presentation to this section by the Canadian delegate to the Commission on Cartography.

The writer participated most actively in the sections on human geography and regional geography. In the first of these, he was acting directly on behalf of the Director of the Geographical Branch, who is chairman of the Committee on Colonization and Settlement and whose working paper (Appendix

IV) was the basis for the discussions of the section. The author was elected as Relator, a kind of Vice-Chairman, for this section. As such he was involved in a number of meetings on the work of the section outside the conference room.

In the section on regional geography, the working paper discussed concerned the classification and use of land. Work in this field has already been started by the Geographical Branch and the section was most interested to hear the details of this work. The author tabled a brief description of land classification and land use surveys carried out in Canada and a bibliography on land use and classification. Copies of these documents are attached as Appendices V and VI.

The writer was elected to a sub-committee whose purpose was to accelerate the revision of the working paper of the section on regional geography. This sub-committee met once, on the afternoon of Saturday, October 21st, and a summary of its activities is presented as Appendix VII.

Each day a bulletin was issued in Spanish, which covered the activities of each commission during the previous day. A complete set of these bulletins is on file in the Geographical Branch and the details of the author's activities can be read from this record. In addition, the United States delegation prepared its own summaries of the activities of each commission in English and this delegation was kind enough to provide the Canadian delegation with these summaries. Copies of those, referring to the Commission on Geography, are attached as Appendix VIII.

The Recommendations and Conclusions Reached

A complete set of the exact resolutions approved by the Commission on Geography and later at the plenary session of the whole Institute was not available when the author left Santiago. The gist of them is contained in the summaries of the second and third plenary sessions of the Commission on Geography.

It was felt that some overall frame of reference for the work of the Commission on Geography was needed since the present organization tended to follow academic lines rather than practical ones. This is embodied in the first resolution. The United States insisted on coupling with this resolution support for PAIGH project No. 29. The author pointed out that he had no authority to express an official opinion on matters directly related to the Organization of American States.

Other resolutions which are particularly noteworthy and/or applicable to Canada are:

- (a) The group of resolutions which basically endorses and approves the programme of action submitted to the Commission on Geography by the Committee on Colonization and Settlement, through the chairman of that committee, Dr. J. W. Watson.
- (b) The group of resolutions endorsing and approving a programme of land use studies in the Americas. These resolutions were based on the types of studies

and activities carried out in this field by the Geographical Branch. In effect, therefore, what the Canadian Geographical Branch did in the field in the summer of 1950 was taken as a pattern for initial land use studies in the Americas, a pattern which other countries are to be encouraged to follow.

(e) A vote of applause to UNESCO for its seminar on the teaching of geography at Montreal during the summer of 1950.

In addition to the discussion activities, exhibitions of maps, charts and books were arranged. Mr. W. H. Miller organized the Canadian section of the map and chart exhibition and the author made himself responsible for the Canadian section of the book exhibition. The exhibition of books and booklets was arranged in a small room on the fifteenth floor of the Hotel Carrera. Most of the space was occupied by the exhibits from the Argentine republic and not all of the countries of the American continents displayed material. A small space was secured, however, for Canada and a photograph of the exhibit appears in the original copy of this report. The materials displayed were in part taken

with the Canadian delegation from Ottawa. As they formed part of their air luggage, they had to be restricted in quantity. Other books and magazines considered to be pertinent to geography and cartography were obtained on loan from the Canadian Embassy in Santiago, who rendered every assistance possible in this respect.

Interpretative Comments on the Conference as a Whole

The work of the Commission on Geography was generally carried out in a manner worthy of the best technical conferences. However, two features distinguished it from similar conferences which the author has attended:

1. The agenda, as published, was not strictly adhered to. While this can happen in the best regulated conferences, it was rather startling, if not inconvenient,

to discover that some times sweeping changes were made at very short notice and without open discussion.

2. There was a tendency for the delegates from the United States to make decisions before a meeting amongst themselves and then to "railroad" their ideas through to the resolution stage. The general motive was to get some practical utilitarian programme of research approved. Their aims and methods are excusable when it is realized that they formed an overwhelmingly large delegation and that the United States Government will probably be called upon to give financial assistance to certain countries in order that the programmes proposed may be carried out.

The sincerity and hospitality of the Chilean authorities were exemplified by the fact that the President of the Republic personally opened the conference and the Foreign Minister closed it, and by the many social invitations extended by Chilean organizations and individuals.

The attitude of the United States geographers to the author was cordial and friendly but definitely not intimate when it came to the "inner workings" of the Institute. This was undoubtedly partly due to the fact that Canada is not a financially supporting member of the Institute. Occasionally, the latter subject was broached, not only by the United States delegates, but by others as well, and one of the resolutions of the Nominating Committee of the Assembly, which was ultimately approved by the whole Institute, was to the effect that Canada should be invited to become a full member. The author, however, had been instructed not to discuss non-technical matters.

Mention should also be made of the assistance and cooperation received from the Canadian Embassy in Santiago, through which our visit to Chile was made much more pleasant and profitable than it otherwise would have been.

While it is quite clear to all concerned that Canada is not in any way committed to implementing any of the recommendations which will be made to the member states of the PAIGH, the author would suggest that such recommendations be taken into account when the research programme of the Geographical Branch is being discussed. It would not detract from the technical quality and use of such research programmes if they did, in places, coincide with certain of the PAIGH recommendations and they would probably aid international harmony.

An Estimate of the Value of Attendance at the Conference

For the author, attendance at the conference was valuable for the following reasons:

1. It enabled him to meet most of the leading geographers of Latin America. During the course of the conference, informal conversations were

carried on with most of the geographers present from other countries. They appeared to be most interested in the developments in geography in Canada and particularly in the Geographical Branch of the Federal Government, since there is no comparable organization in any of the American republics, except Brasil. Many of the delegates presented the writer with geographical materials published and produced either by their Governments or by themselves, for the Branch library.

2. It enabled him to formally present the research being done by the Geographical Branch, to receive technical criticism on this research where it applied and to give technical information to those parts of the Americas where such geographical surveys have not yet been started.

3. It enabled him to learn of geographical research being done elsewhere on the American continents, particularly with regard to the techniques being used.

4. It enabled him to see parts of South America for the first time, particularly parts of central Chile.

5. It enabled him to participate in the formulation of working plans which, if carried out in each Latin American republic, would assist in the raising of the standard of living in those countries and hence indirectly benefit Canada and the rest of the world.

APPENDIX I

"PROFESSIONAL DELEGATES" AND OBSERVERS

International Geographical Union
International Union of Geodesy and Geophysics
International Astronomical Union
International Society of Photogrammetry
International Committee on Historical Studies
International Council for Scientific Studies
International Civil Aviation Organization
Inter-American Institute for the Care of Children
Inter-American Geodetic Survey
Institute of Inter-American Affairs
Pan-American Health Organization
Organization of American States
United Nations Educational, Social and Cultural Organization
Inter-American Statistical Institute
Inter-American Institute of Indigenous Cultures
Viking Foundation
Rockefeller Foundation
Chilean Department of Aeronautics
Geographical Society of Chile
Chilean Institute of Geography
Chilean Department of Statistics
Chilean Department of Public Works
Chilean Meteorological Office
Chilean Navy
Chilean Air Force
Chilean Institute of Agricultural Economics

University of Chile

Conception Geographical and Historical Society

Chilean Department of Lands and Colonization

Chilean Military Polytechnic School

Folklore Society of Mexico

University of Puerto Rico

Geographical and Historical Society of Honduras

Temple University

American Academy of Political and Social Science

American Geophysical Union

American Society for the Advancement of Science

Association of American Geographers

U. S. Office of Naval Research

American Geographical Society

U. S. Research and Development Board

National Institute of Anthropology and History

American Congress on Surveying and Mapping

U. S. Aeronautical Chart Service

National Observers from: Germany

Spain

United Kingdom

Italy

Switzerland

APPENDIX II

PROGRAMME OUTLINE

Wednesday, October 18

- | | |
|---------------------|---|
| 9:00 to 13:00 hours | <u>Second Plenary Session of the Assembly</u> |
| 15:00 to 18:30 " | <u>First Plenary Session of the Second Reunion of the Commission on Geography</u> |
| 19:00 " | Inauguration of the Exhibitions on Cartography, on Geography and on History. |

Thursday, October 19

- | | |
|---------------------|--|
| 9:00 to 12:00 hours | First Meeting of the Section on Physical Geography and Biogeography |
| 15:00 to 18:00 " | First Meeting of the Section on Human Geography—a discussion of the working paper prepared by the Committee on Settlement and Colonization |

Friday, October 20

- | | |
|---------------------|--|
| 9:00 to 12:00 hours | First Meeting of the Section on Regional Geography—a discussion of the working paper prepared by the Committee on the Classification and Use of Land |
| 15:00 to 18:00 " | First Meeting of the Section on Methodology and Teaching—a discussion of the working paper prepared by the Committee of the same name. |

Saturday, October 21

- | | |
|---------------------|---|
| 9:00 to 12:00 hours | First Meeting of the Section on the Geography of the Americas—a discussion of the working paper prepared by the Committee of the same name. |
|---------------------|---|

Monday, October 23

- | | |
|---------------------|--|
| 9:30 to 12:00 hours | <u>Third Plenary Session of the Assembly</u> |
| 15:00 to 16:30 " | Second Meeting of the Section on Physical Geography and Biogeography |
| 16:30 to 18:00 " | Second Meeting of the Section on Human Geography |

Tuesday, October 24

- | | |
|---------------------|---|
| 9:30 to 10:30 hours | Third Meeting of the Section on Physical Geography and Biogeography |
| 9:30 to 10:30 " | Second Meeting of the Section on the Geography of the Americas |
| 11:00 to 12:00 " | Second Meeting of the Section on Methodology and Teaching |

| | |
|------------------------------|---|
| 15:30 to 16:30 hours | Second Meeting of the Section on Regional Geography |
| 18:00 to 19:30 " | Third Meeting of the Section on Human Geography |
| <u>Wednesday, October 25</u> | |
| 9:30 to 12:00 hours | Resolutions Committee of the Commission on Geography |
| 15:00 to 18:00 " | |
| 18:00 to 19:00 " | <u>Second Plenary Session of the Commission on Geography—to discuss resolutions</u> |
| <u>Thursday, October 26</u> | |
| 9:00 to 11:00 hours | Resolutions Committee of the Commission on Geography |
| 11:00 to 12:00 " | <u>Third Plenary Session of the Commission on Geography—to discuss resolutions</u> |
| <u>Friday, October 27</u> | |
| 9:30 to 12:00 hours | <u>Fourth Plenary Session of the Commission on Geography</u> |
| 15:00 to 16:00 " | <u>Fourth Plenary Session of the Assembly</u> |
| 19:00 " | <u>Solemn Closing Session of the Assembly and of the Consultations.</u> |

APPENDIX III

NATIONAL REPORT OF CANADA TO THE FIFTH GENERAL ASSEMBLY OF THE PAN AMERICAN INSTITUTE OF GEOGRAPHY & HISTORY ON THE PROGRESS OF GEOGRAPHY IN CANADA, 1950.

The Canadian delegation to the Commission on Geography of the Pan American Institute of Geography and History is pleased to submit the following report on the progress of geographical studies in Canada in 1950.

PART ONE

(A) Re: Resolutions and Recommendations of the Institute

The Geographical Branch of the Government of Canada has conveyed to the Canadian Authorities, through the Minister of Mines and Technical Surveys, the resolutions and recommendations in the Assembly at Caracas and in the subsequent Consultation on Geography at Rio de Janeiro.

These resolutions and recommendations have been taken under advisement and will be given every consideration where they can be related to the policies and plans of the Government.

(B) Work of Geographical Agencies in Canada

The principal geographical agencies in Canada consist of the Federal Geographical Agency, the Canadian Geographical Society, and Departments of Geography at the Universities of Laval, Montreal, McGill, McMaster, Toronto, Western Ontario, Manitoba and British Columbia. Geographical work is also done by several general agencies of Provincial Governments. The Federal Government Agency was formed in 1947 as the Geographical Bureau of the Department of Mines and Resources. In 1950 it was reorganized as the Geographical Branch of the Department of Mines and Technical Surveys under the direction of Dr. J. W. Watson. The chief divisions of the Branch consist of:

- (i) Canadian Geographical Research, under the supervision of Mr. N. L. Nicholson.
- (ii) Foreign Geographical Research, under Mr. G. A. Bevan.
- (iii) Cartographic Production, under Dr. R. T. Gajda.
- (iv) Map Reference Service, under Mr. J. W. Telfer.
- (v) Library and Bibliographical Services, under Miss J. I. Matheson.

The Geographical Branch is the chief agency in Canada sponsoring field work. The geographical field work in Canada in 1950, sponsored by the Geographical Branch, employed sixteen of its own geographers together with ten University professors and fifteen graduate students drawn from each of the eight Universities in Canada with Departments of Geography.

The field work consisted of physiographic-ecological studies of Arctic regions; the survey of resources and their use and potential development in the pioneer zone in the sub-arctic; the economic geography of resource utilization in critical areas of the Prairies and Maritime Provinces; the social geography of urban communities; and the study of special problems such as the effect of aridity in interior British Columbia on land utilization and settlement.

Other projects undertaken by the Geographical Branch consisted of a survey of ice conditions in Canadian waters; a survey of surface conditions in Arctic terrain; continuation of studies begun on the nature, distribution and effects of permafrost; the preparation of maps of the scale of 1/5 million of the distribution of mineral production and water power in relation to the physiographic regions of Canada and of the distribution of varieties of forests, types of farming and kinds of fisheries in Canada; and the preparation of initial plates for the Atlas of Canada showing economic and social data.

The work on the Atlas of Canada, to be reported more fully before the Commission on Cartography, has advanced considerably. The Atlas project, put into the hands of an Interdepartmental Committee by the Canadian Government, is a co-operative venture. The Geographical Branch has received submissions from each Department of Government and advises on the material to go into the Atlas. Its geographers are engaged in research into different methods of portraying the data submitted.

Provincial Agencies

Other geographical research has been carried on by the Land Utilization division of the British Columbia Department of Lands; by the Saskatchewan Department of Resources and Industrial Development; by the Conservation Branch of the Ontario Department of Planning and Development; and by the Office of Economic Research of the Quebec Department of Trade and Commerce. This has consisted of land utilization surveys and studies in urban geography made in connection with developmental programmes within the Provinces. Although there are no Provincial geographical agencies, as such, the various Departments named above employ geographers, along with ecologists, sociologists and economists in joint surveys of interest to all these disciplines.

The Arctic Institute

No geographical institutions, societies or academies have undertaken geographical research during the past year. However, the Arctic Institute of North America employed geographers on an expedition to study terrain, ecology and ice conditions in Baffin Island.

University Geography Departments

Each University Department of Geography at Quebec, Montreal, Toronto, Hamilton, London and Vancouver directed the research of undergraduate and graduate students on the geography of their localities. A list of the theses presented at these universities has been prepared by the Geographical Branch of the Government, and is appended.

Geographical Publication in Canada

Publications of geographical research have appeared chiefly in article form in various geographical journals. A list of such publications has been prepared by the Geographical Branch and is appended.

During 1950 the Geographical Branch has produced the following publications:

- A Bibliography of Colonization and Settlement in Canada
- A Bibliography of Greenland
- A Handbook of the Canadian Arctic (in press)

The Geographical Regions of Canada (Script & Film Strip)

The geographical periodicals that have appeared in Canada consist of:

The Canadian Geographical Journal, Vols. XL, XLI, Nos. 1-6, 1-3.

Revue Canadienne de Géographie, Vol. IV, Nos 1-2.

Ontario Geography Monographs, the publication of the Geographical Section of the Ontario Educational Association.

The Geographical Branch has prepared the first number of a bi-annual Bulletin which will publish the results of work in progress in its regional surveys. This number will include a study of conservation in the Ausable Valley, S. Ontario; the urban geography of Trois-Rivières, Quebec, the physiography of the Thelon Basin, Keewatin District; and a description of the Soil Regions of Canada.

(C) Exchange of Personnel

The exchange and training of technical personnel of other countries have not been very evident in Canada up to the present. Canada sends its young geographers to Britain, France and the United States for their advanced training.

However, the Department of Geography and History at Laval employed two visiting professors of geography from France; the Department of Geography at the University of Montreal employed another French professor in the same capacity; and the Department of Geology and Geography at the University of British Columbia has employed the services of a noted British Geographer. The Geography Summer School of McGill University secured the aid of prominent British and American geographers and attracted many American students.

The graduate schools in geography at McGill and Toronto Universities are training foreign students from the United States, Britain and the British Commonwealth.

PART TWO

1. Participation in the Commission on Geography

Canada had the honour of being invited to participate in the work of the Commission on Geography during 1950.

Dr. J. W. Watson, Director of the Geographical Branch of the Canadian Government and Canadian representative to the Commission was nominated Chairman of the Committee on Colonization and Settlement.

In collaboration with other members of this committee he prepared a programme of action which he had the privilege of presenting to the Consultation on Geography at Rio de Janeiro in June, 1950.

In preparation for such a Programme the Geographical Branch engaged in the following research:

A Bibliography of Colonization and Settlement in Canada
A Survey of University Theses on Colonization and Settlement presented for Higher Degrees
The Preparation of Maps on the Colonization and Settlement

of the Northern Prairie
 A Survey of the Railway Settlements of Newfoundland
 The Social Geography of the Settlements of Labrador
 The Urban Geography of Expanding Urban Settlements in Nova Scotia.

2. Activities Developed in the Fields of Committees of the Commission on Geography.

In addition to the activities related to the Committee on Colonization and Settlement research was carried on in connection with the other Committees.

(i) The Committee on Land Classification and Land Use.

The Geographical Branch undertook Pilot Studies of extensive areas in two contrasted regions in Newfoundland and Alberta following the methods of land classification proposed by this Committee. These were chorological rather than topographical surveys and were made on the scale of 1/250,000.

Comparative surveys, based on other methods, were also practised, with a view to determining which method the Canadian government should adopt in advancing its programme of regional studies.

(ii) The Committee on the Geography of the Americas.

The Geographical Branch is preparing a series of regional handbooks on the geography of the major regions of Canada which will be presented as the Canadian contribution to the Geography of the Americas.

Two Handbooks have so far appeared. These are:

- (a) The Geography of Newfoundland
- (b) Handbook of the Canadian Arctic (in press)

(iii) The Committee on Teaching and Methodology.

No formal research on teaching and methodology has been conducted on these topics. However, the Geographical Branch, the Canadian Federation of Teachers and the Catholic Teachers' Federation sent representatives to the U.N.E.S.C.O. International Seminar on the Teaching of Geography held at Ste. Anne de Bellevue, Quebec, in July and August, 1950.

The first attempt at co-ordinating Canadian experience on the teaching of Canada was then made, and out of this a preliminary formulation of Canadian aims in teaching and methodology should appear.

Respectfully submitted by
 N. L. Nicholson
 on behalf of
 J. W. Watson
 Canadian representative to the
 Commission on Geography.

PROPOSALS OF THE CHAIRMAN OF THE
COMMITTEE ON COLONIZATION AND SETTLE-
MENT OF THE PAN AMERICAN INSTITUTE
OF GEOGRAPHY AND HISTORY.

To be presented at a Conference of Chairmen of
Committees, Rio de Janeiro, in June, 1950.

I beg to submit the following proposals for consideration by
the Council of Chairmen of Committees for presentation to the
Conference of the Pan American Institute of Geography and
History to be held in Santiago, October, 1950:

1. That the Committee on Colonization and Settlement acts
as an agency of the Geographical Congress of the Pan
American Institute of Geography and History to facilitate
the study, in the Division of Human Geography, of the
special field of the geography of colonization and
settlement. In this capacity the Committee would carry
out the policy laid down by the Institute and also
advise it on matters pertaining to colonization and
settlement.
2. That the Committee should perform certain permanent and
practical functions on behalf of the Institute such as:
 - (a) to arrange for the collection and co-ordination
of an annual bibliography of books and papers on
the geography of colonization and settlement in
the Americas, thus helping to fulfil Resolution 53
of the First Pan American Consultation on Geography;
 - (b) to organize and contribute an annual bibliography
of all graduate theses in the geography of coloni-
zation and settlement; and to be responsible for
creating a micro-film library of unpublished theses
and monographs, on behalf of the Institute.
 - (c) To make an inventory and prepare index maps, as
per Resolution 56, showing all the areas at pre-
sent studied in the field: (this would probably
constitute an "atlas of ignorance" concerning
settlement problems, and would point up areas
which have been unduly neglected in contrast to
those where there has been an undue concentration
of research);
 - (d) to prepare an atlas of the geography of coloniza-
tion and settlement in the Americas which would
emphasize.
 - (i) areas of maximum and of minimum colonization,
 - (ii) space-time charts of the times when differ-
ent areas achieved and passed their climax of
colonization.

- (iii) areas of post-war colonization, 1945-50,
 - (iv) areas of marginal colonization (conditional upon current circumstances),
 - (v) areas of optimum colonization,
 - (vi) areas of potential colonization,
 - (vii) total population
 - (viii) the present distribution and densities of population of the native races of the Americas
 - (ix) the historic and present distribution of other ethnic groups and groups of common national origin in the Americas
 - (x) population by sex and age
 - (xi) the political geography of colonization
 - (xii) the character and distribution of the chief settlement types, both urban and rural, of the Americas
- (e) That the Committee makes an inventory of all Universities which offer courses in the geography of colonization and settlement, as per Resolution 60;
 - (f) Further, that it makes an inventory of all Institutes devoted to population, colonization and settlement.
 - (g) That it records the governmental agencies, at all levels of government, responsible for colonization and settlement in each country of the Americas and that it organizes the study of their policies and of their programmes of research and administration;
 - (h) That the Committee advises the Institute of how to relate the work of the Institute to that of other significant organizations, particularly the Inter-national Geographical Union and U.N.E.S.C.O., as in Resolution 64.
3. That in relation to the U.N.E.S.C.O. Work Plan for 1960-61, in the Social Sciences, the Committee studies how best to establish liaison with U.N.E.S.C.O. in the following categories;
- (a) bibliographical contributions on the geography of colonization and settlement made towards the proposed single international cumulative index and guide to the social sciences.
 - (b) terminological contributions on the terms used in the study of colonization, and their standardization in connection with the U.N.E.S.C.O. plan of standardizing terms in the social sciences,
 - (c) advice on the contributions which geographers could make to the proposed establishment, by U.N.E.S.C.O. of Field Science Co-operation Offices, to bring together different sciences in field surveys of colonization and settlement problems, in different countries.

4. Further, that in connection with the U.N.E.S.C.O. Plan of studying social tensions in relation to nationalism and internationalism, to population and to technological progress, the Committee organizes and co-ordinates various studies, on behalf of the Institute.

These would include;

- (a) Studies of the geographical pattern of life in each of the American countries with a view to informing immigrants of the main settlement problems and opportunities; (some countries have already done this, though not always successfully because they have not always used professional geographers for the purpose).
- (b) Studies of the social geography, in considerable detail, of typical urban and rural communities in the principal geographical regions of each country; (this would be in accordance with Resolutions 35 and 37).
- (c) Studies of the geographical patterns of life in the countries from which colonizers have come, to indicate what would be familiar and what strange in the mode of life and kind of settlement to which they might proceed.
- (d) Studies of the ideas prevalent in the country of origin (of the immigrant) about the country of destination, and vice versa, and of how these ideas affect adaptation and settlement. (Are there stereotypes of the types of settlers who do best in a particular country, or types of countries most suited to particular immigration groups? What part do such stereotypes play in the choice of settlement or selection of settlers? Have such stereotypes any geographical validity?)
- (e) Studies of how population trends and mores in one country, and of the patterns associated with them, affect the reaction of the migrant to another country which has other mores and patterns. Do they influence his choice of country of destination or of the community within that country?
- (f) Studies of the changes in settlement patterns due to rapid or slow immigration, mass or selective immigration, immigration at periods or in regions of sparse or dense population, immigration of heterogeneous or homogeneous populations, the changing ethnic or sex or age composition of the population, etc.
- (g) Studies of the effects of emigration on the settlements of countries and/or communities.
- (h) Studies of the technological habits and standards of each country and region in relation to colonization, and also of the immediate technological needs of countries. Special attention should be given to the effects on settlement of the colonization of technologically backward groups in technologically forward countries, or forward groups in backward countries.

- (i) Studies of the results of technological advance in cities where rural areas are still technologically backward.
 - (j) Studies of the general influence of technology on patterns of settlement and on the geography of their distribution, growth or decline.
5. That the Committee on Colonization and Settlement initiates or co-ordinates, on behalf of the Pan American Institute of Geography and History, the following independent studies;
- (a) Surveys of existing methods used in governments and universities in their research on the geography of colonization and settlement.
 - (b) The formulation of standard procedures for studying and mapping colonization and settlement.
 - (c) Comparative studies of the colonization and settlement of homologous geographical regions in different American countries. Similarities in resulting patterns would show the influence of geographical factors; differences, of social factors.
 - (d) Comparative studies of the settlement patterns of single ethnic groups in various countries or regions, and of varied ethnic groups in single countries or regions.
 - (e) Studies of the geographical patterns involved in acculturation as the immigrant changes his initial organization of settlement (brought from his original environment) to conform to the prevailing pattern in the region colonized. Emphasis should be put on the geography of conflict, disintegration, accommodation and integration.
 - (f) Studies of the geo-absorptive capacity of American countries to absorb colonizers. These involve studies by systems of agriculture and industry and urbanization as related to colonization.
 - (g) The formation of principles of adaptation of the immigrant to the American scene. This could only follow the previous studies, with their exhaustive examination of his reactions to the physical, technological, economic, social and cultural environments of the Americas.
 - (h) Studies of the relationship of geography to economics, political science, anthropology and sociology in their various approaches to the problems of colonization and settlement.
 - (i) Studies of the extent to which government policies and administration are or are not adapted to geographical conditions.

- (j) Suggested procedures and programmes which different countries might use in adjusting colonization and settlement to the geography of those countries.

Respectfully submitted,

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Chairman,
Committee on Colonization
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APPENDIX V

A BRIEF DESCRIPTION OF LAND CLASSIFICATION AND LAND USE SURVEYS CARRIED OUT IN CANADA

Land use and land classification surveys are carried out in Canada by provincial departments of Agriculture, other provincial departments, concerned with planning and with trade and commerce, and by the Federal Department of Agriculture and faculties of agronomy in Canadian universities. For the most part such surveys have been carried out by one or two or even three of these organizations working together on a co-operation basis.

The techniques of soil surveying are well-known in Canada and have been applied successfully all over the inhabited areas. On the other hand the methods and techniques of land use and land classification surveys are relatively new. They started before World War II, and are applied only in a few provinces. At the present time these techniques have not reached their final stage and are considered as experiments. Before long, however, the best methods, and those which will give the finest results suitable for Canada, will be found and employed. A quick glance throughout Canada will give an idea of what is being done today in this field of research.

In Nova Scotia

The survey conducted in Antigonish County was done by the Nova Scotia Department of Agriculture in co-operation with the Agricultural Economics Branch of the Federal Department of Agriculture. This study covered the general economic conditions of the land, and the land utilization survey was more or less an inventory of the land in farms, with a special study of 163 farm holdings. The land use per farm was divided in three main categories with subdivisions.

Land use on 163 farm holdings
percentages of.....

- I. area in crops
- II. pasture area
 - (a) tillable
 - (b) woods
 - (c) other
- III. woods not pasture

Another survey carried out in Cape Breton County by the same two Departments adapted the following system based on a survey of 247 rural holdings:

- | | | |
|----------|-----------------------|----------------|
| | I. crops | V. waste |
| acres in | II. permanent pasture | VI. idle land |
| | III. woods pasture | VII. farmlands |
| | IV. woods non-pasture | |

The purpose was to determine the contribution of the land toward the living of the people in rural Cape Breton Island and Cape Breton County; it was, in fact, a classification of the land according to its suitability for agricultural production.

This last summer, the Geographical Branch sponsored a land use survey in the Maritimes, in Colchester County. This work carried out by a field party under the direction of Dr. D. F. Putnam, is known to be of interest to the Nova Scotia Foundation Research, which is proposing to make a land utilization survey of

the Province. They applied a method that is comparable in some respects to the Land Use Survey of Britain. It was a survey of the present land use, plotted on maps based on aerial photographs and on one inch topographical sheets of the area. The land was classified as:

- I. woodland
- II. cropland
- III. pasture
- IV. urban and built-up areas

It is a pilot study of which the results will be published soon and can be considered as the first of its type ever done in the Maritime Provinces.

In Quebec

Land use and land classification surveys have not been attempted yet, in Quebec. However, the Department of Trade and Commerce of the Province through its Economic Research Office has conducted over many years, surveys of counties. These surveys are what one calls in geography, regional surveys. They are made by a team of two or three research men working in the summer. These men, including one geographer, one economist and one agronomist, study all the economic activities of the county. These surveys are based on field work, statistics, interviews with people, etc., but they have no specific object, such as proposed land use, or master plans for urban planning areas. They are simply an inventory of the county with an attempt to solve some of its problems. This office would be the best organization to undertake such surveys as those carried out by the Ontario Department of Planning and Development. The other organization that deals with surveys is the Field Husbandry Service of the Department of Agriculture. These surveys are plain soil surveys, scientifically conducted, in which they include some factors that might be useful to land use surveys, such as drainage conditions, topography, and urban and built-up areas.

A former staff member of the Department of Geography at McGill University conducted a special land use survey of the Huntington-Chateauguy Counties during the summer of 1948-49. They used the long fraction method to plot the characteristics of the land in these counties. This system is called the hexagonal sampling system. Essentially, the hexagonal sampling system consists of a number of sample blocks of equal size, uniformly spaced over the total area to be studied. The sizes of sample blocks are kept constant.

In Ontario

In this province, land use and land classification surveys and their techniques are known and applied successfully. G. V. Jacks in his study on land classification, describes the system of land classification outlined by Hills (reference p. 55) which was based on soils' surveys and where economic and social factors were entirely neglected, it has been one of the first attempts in this province.

The efforts of the Experimental Farm Service in co-operation with the Ontario Agricultural College, conducted in 1941 a soil erosion and land use survey of the Hope township project in Durham county. The survey adapted two classifications: the present land use with land subdivided into: (1) cropland, (2) pasture land, (3) woodland, (4) idleland, and the land use capability classes.

3.

The land has been grouped into five classes on the basis of the physical characteristics, which determine its capability for use and conservation. Here is the classification:

1. Land Class I. ---suitable for cultivation without special practices.
2. Land Class II. ---suitable for cultivation with simple practices.
3. Land Class III. ---suitable for cultivation with complex or intensive practices.
4. Land Class IV. ---not suitable for continuous cultivation
5. Land Class V. ---not suitable for cultivation.

Classes I, II, and III are suitable for crops that require tillage, classes IV, and V are best adapted for pasture and forest land. The present land use was plotted on a base map made from aerial photographs. This survey was followed by the study of the Camaraska watershed in 1944, based on this system of land use and land classification.

After the war the Ontario Department of Planning and Development started a series of surveys of river watersheds. One of the first, the Thames Valley conservation survey, started in 1946 and from the results of this survey, a system of land use capability was explained and proposed. It was the same classification as the one used for Hope Township, Durham County, with a few additions. For instance, the land is classified into four main categories:

A - Land suitable for cultivation:

- I. Land suitable for cultivation without special practices.
- II. Land suitable for cultivation with one or more simple practices.
- III. Land suitable for cultivation with intensive practices.

B - Land suitable for occasional or limited cultivation:

- IV. Land suitable for occasional cultivation with limited use and intensive practices. Its chief use is for long term hay or pasture with cultivation limited to reseeding.

C - Land not suitable for cultivation but suitable for pasture or woodland:

- V. Land suitable for pasture or woodland with no special restrictions.
- VI. Land suitable for pasture or woodland with moderate restrictions.
- VII. Land suitable for pasture or woodland with severe restrictions.

D - Land not suitable for productive vegetation:

VIII. Marshes and other areas incapable of producing vegetation of economic importance other than for wildlife.

The present land use was classified as usual into cropland, pasture, woodland and idleland. The same technique was employed for the Etobicoke Valley survey. (Report published in 1947). In 1947 the Department of Agriculture of Canada (Federal) reconsidered the land classification in Durham County (Hope & Clarke townships). This new classification represents the grading of land on the basis of its productivity and potential use and takes into consideration soil, topography, present use of land, crop yields, livestock production, condition of buildings, and other economic factors. Intended to reveal productive value and the use to which land should be put, the land had been classified into five classes established on the basis of returns expected from mixed farming:

- Class I —submarginal land — very low returns, swampy, undrained land or heavily wooded, sandy and gravelly nature, topography is steep and hilly.
- Class II —also considered as submarginal—soils are sandy and gravelly loams, topography is undulating to rolling, land is farmed successfully, good for pastures.
- Class III —marginal land — average conditions, undulating, sandy loam, growing of grain and fodder crops.
- Class IV —above the marginal land class — under proper management accessible to good roads, includes soils suited to the growing of cash crops.
- Class V —best grade of land — level land, intensely cropped, adjacent good markets.

The land utilisation was kept the same, having land still divided into: cropland, pasture, other improved land, woodland, unimproved land and swamp.

After the war, in 1945, the newly formed Department of Planning and Development of the province, started a series of surveys of watersheds such as the South Nation river, the Moira, the Thames, the Humber, etc. The Ausable watershed conservation report published in 1949 has been chosen to illustrate the techniques of land use and land classification. The methods have been grouped and presented on one single page (Appendix I) in order of field research. The survey comprises also, large studies of other resources of the drainage basin such as forests, water, recreation and wildlife. Land use is mapped field by field, using detailed maps of 1,200 feet to the inch or one mile to the inch. These were made from aerial photographs. The land use survey as it is carried out in Ontario these past years, represents valuable research in itself; its results are close to those produced by the Land Survey of Britain and can be explained and applied to other countries. Of course, there are as many kinds of land classification as there are interests in land, but the techniques are pretty much the same. These watersheds surveys are fine examples.

The Prairie Provinces:

This part of Canada has been a field of research since the first settlers established themselves on these unlimited lands. Irrigation projects, soil conservation, fight against drifting of the soil have all been experimented with, in many of the regions of the prairies. This includes use and land classification.

The system of Stewart and Porter proposed in 1942 in the Land use classification in the special areas of Alberta is essentially an economic classification of farm land based on extensive field surveys conducted between 1935 and 1940. (The system is explained in detail by G. V. Jacks, on pages 53-54 and also in the study mentioned above on pp. 65-66).

The preliminary classification is as follows:

(a) determination of a physical productivity rating for each parcel of land, based on (i) the average long-run yield of wheat for the soil type of the parcel, (ii) the acreage of tillable land, and (iii) the typical proportion of tillable land in wheat.

(b) conversion of this measure of gross physical productivity into terms of estimated net revenue using (i) long term average prices for wheat and other farm products, and (ii) a budget of costs derived from farm management survey data.

(c) preliminary classification on the basis of certain ranges of estimated net revenue. Four classes were distinguished, and these are the classes that are mapped:

Class I. - estimated annual production of marketable wheat per quarter available for sale less than 375 bushels, and estimated revenue less than costs (submarginal).

Class II. - estimated annual production marketable wheat per quarter available for sale 375-517 bushels, and estimated revenue equal to a range of costs (marginal).

Class III.- estimated annual production of marketable wheat per quarter available for sale 518-795 bushels, and estimated net revenue up to \$237. per parcel.

Class IV. - estimated annual production of marketable wheat per quarter available for sale 796-999 bushels, and estimated net revenue of more than \$237. and less than \$411. per parcel.

This classification provided a uniform basis on which to compare parcels of land in widely scattered areas, with significantly different general features. These classes are also called, submarginal, marginal, fair and good. This preliminary classification is modified to allow for the particular features of individual parcels such as topography, stoniness, erosion, climate and other physical characteristics.

In Alberta and Saskatchewan, the P. F. R. A. (Prairie Farm Rehabilitation Act) a federal organization, has also conducted several types of surveys dealing with land classification and land use. The classification has been based upon a typical wheat growing unit in respect to size, equipment and management. There are five proposed classes: class one (submarginal), class 2, (marginal), class 3, (fair), class 4 (good), class 5 (excellent).

In Saskatchewan the Land Use Committee, created in 1935, conducted a survey in over 10 municipalities of this province. Their basis for an economic classification of land was in terms of wheat production. Five classes were distinguished:

Class I --(submarginal) - 350 bushels of marketable wheat per quarter section per year.
 Class II --(marginal) - from 351 to 475 bushels.
 Class III, IV, V --suitable for wheat production over 475 bushels. Also called supremarginal.

The land utilization survey classified the land like this:

| | | | |
|-------|-------------------------|---|-------------------------|
| | 1 - cultivated land | — | pasture |
| | 2 - native sod | — | hay |
| acres | | | 1. naturally regressed |
| of: | 3 - abandoned farm land | — | 2. perennial weed stage |
| | | | 3. annual weed stage |
| | 4 - waste | | |

(1) This system is fully explained on pp. 29-34 of Stewart and Porter, Land use classification in the special areas of Alberta.

In British Columbia

A programme of systematic land classification started in 1942 under the administration of the provincial Department of Lands. The survey was discontinued in 1944 and reconstituted in 1946. The primary purpose of the survey was to place the particulars concerning available and suitable units of land at the disposal of the Lands Department. The information would benefit the present population and serve as a guide for incoming settlers by reserving the present settlement, and classifying land as unsuitable for farming. Surveys were and are being undertaken in the Peace River, the Prince George region, and the Kootenay Survey. Maps and texts of these surveys will be published as soon as an area of good size dimension would be surveyed. It has been impossible to find out the kinds of techniques they have used; one understands, however, from Dr. J. Lewis Robinson, of the Department of Geography of the University of British Columbia, that their system is comparable to the system used by the Ontario Department of Planning and Development.

One might add a few words on other types of surveys conducted by special bodies like the Federal District Commission of Ottawa dealing with the planning of the capital and the Montreal Planning Board which deals with the metropolitan area of Montreal. This last organization offers several examples of what is being done in urban planning and the scope of such planning in several other cities. The first body, however, deals with a larger area and has proposed several interesting experiments. One of their maps proposed five classes of land, from very good to very poor,

showing the adaptability of land to building development; another map concerns land use and shows residential areas, industrial areas, federal and institutions, public and private open spaces and wooded areas.

The most recent contribution of the Geographical Branch in this field of research, was made during the summer of 1930. Four parties were sent out; one to Northern Alberta lead by Dr. B. Zaborski, one to Newfoundland lead by Dr. L. Reeds, one already mentioned to Nova Scotia lead by Dr. D. F. Putnam, and one lead by Mr. T. Weir to British Columbia. Parts of these surveys were concerned with land use and development of settlement, but for most part, the main purpose was to experiment with new methods and new techniques of land classification and land use. All these surveys have a geographical connotation. Their reports will give other and new results to what has been recently done in other parts of this country.

APPENDIX I

The Ontario Department of Planning - Land use and land classification surveys made for studies of river watersheds. The chapter concerning land use is divided into four steps which represent four different classifications: 1. a classification of the present land use, 2. then a detailed land use map of a small area of the watershed, 3. a detailed combine study of soils and land use on sample strip. (For instance, one takes half-mile along highway No. 11.) 4. the recommended land use.

I. Present land use. - Four classes:

- 1 - cultivated use
- 2 - permanent pasture
- 3 - woodlots
- 4 - non-agricultural land (wasteland, recreational areas) and urbanized land.

II. Detailed land use - Ten classes:

- 1 - open water
- 2 - floating bog
- 3 - unimproved marsh
- 4 - slash
- 5 - woodlots and forest
- 6 - fallow and idle land
- 7 - pasture
- 8 - grain
- 9 - truck crops
- 10 - miscellaneous

III. Detailed combined study of soils and land use on sample strips. In this case, there are six different legends, as follows: 1. soil material, 2. profile development, 3. slope class, 4. estimated erosion, 5. topographical symbols and, 6. present land use. This last legend classifies the land like this:

- | | |
|--------------------------------------|-----------------------------|
| 1 - idle | 7 ⁸ - soybeans |
| 2 - forest | 8 ^c - cabbage |
| 3 - permanent unimproved pasture | 9 ^p - green peas |
| 3 ^a - pasture in rotation | 10 - roots |
| 4 - hay | 11 - sugar beets |
| 5 - silage corn | 12 - fruit |
| 6 - grain | 13 - summer fallow |
| 7 ^b - dry beans | 14 - flax |

IV. Recommended land use:

- | | |
|--------------------------|------|
| 1 - unrestricted use | (L) |
| 2 - drainable | (Ld) |
| 3 - conservation farming | (CF) |
| 4 - restricted use | (LR) |
| 5 - pasture | (P) |
| 6 - pasture cultivated | (PL) |
| 7 - wooded | (F) |
| 8 - special use | (SU) |
| 9 - permanent vegetation | (FF) |

Symbols in brackets are plotted on the map.

APPENDIX VI

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