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ETHIOPIA

Operational action for
the safeguarding of the immovable
cultural heritage and
its reintegration into modern life

Master Plan for the Preservation and Presentation of Cultural Heritage

by
Flemming Aalund

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United Nations Educational,
Scientific and
Cultural Organization

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E T H I O P I A

MASTER PLAN FOR THE PRESERVATION
AND PRESENTATION OF CULTURAL HERITAGE

by Flemming Aalund

Report prepared for the Government of
Ethiopia by the United Nations Educational,
Scientific and Cultural Organization
(Unesco)

U N E S C O

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Note on spelling of proper names

In standard English reference works on Ethiopia, proper names have been transcribed in a number of different ways. For names of sites included on the World Heritage List, the present report uses the spelling adopted by the Ethiopian Government in its nomination form. For other names, the most widely accepted spelling has been adopted. In all cases, variant spellings have been indicated in footnotes when the name first occurs in the text.

INTRODUCTION

1. At the request of the Government of Ethiopia, The Director-General of Unesco arranged, under the Organization's Regular Programme for 1984 - 1985, for a consultant mission to be carried out, between 19 March and 19 May 1984, in connexion with the proposed international campaign for the preservation and presentation of the cultural heritage of Ethiopia. The actual organization of the mission was entrusted to the International Council on Monuments and Sites (ICOMOS) which has been closely involved in preparations for the campaign. The consultant's terms of reference were as follows:

"Within the framework of Resolution 19 C/4.126, adopted by the General Conference of Unesco at its nineteenth session, held in Nairobi in 1976, the consultant shall prepare a Master Plan and update the Plan of Action for the preservation and presentation of the cultural heritage of Ethiopia. The Master Plan should give detailed costs for the restoration work to be undertaken with a view to launching an international campaign."

2. The itinerary and schedule of field visits during the mission are given in Annex I of this report, while the persons consulted are listed in Annex II.

3. Part I of the report provides background information on the preservation of Ethiopia's cultural heritage; Part II discusses the Centre for Research and Conservation of Cultural Heritage (CRCCH) and proposes measures for strengthening the capacity of the Centre's various Divisions to discharge their heavy responsibilities. The succeeding five parts deal with the following monuments and sites: Aksum¹, Tiya, Lalibela, Lake Tana, Gondar and Harar.² Summaries of work plans and their estimated cost are set out at the end of the chapter on each site, while total costs for all sites together are recapitulated in Annexes X, XI and XII.

4. The programme of work proposed for each site may take ten years to carry out, whereas the plans for financing the work from external sources are costed for five years only, after which time a review of the Campaign and planning for a possible continuation will be needed.

5. While at the national level the Government will set up an appropriate body with sufficient authority to co-ordinate all activities related to the International Campaign, a working group consisting of a representative of the Government of Ethiopia and a few international and national experts will be set up. This working group will meet on an ad hoc basis to advise the Director-General of Unesco and the Government of Ethiopia on all technical matters related to the Campaign and on the use of the contributions received by the fund set up for this purpose by Unesco.

6. To ensure effective management of the International Campaign, the administrative machinery for its execution needs to be thoroughly evaluated at an early stage. In this Master Plan it is envisaged that an international co-ordinator would be appointed for a duration of five years, supported by

1 also spelt Axum

2 variant spellings are Harer and Harrar.

a number of experts in different fields and serving for varying periods. Alternatively, the Ministry of Culture would appoint an Ethiopian national to deal with all matters related to the International Campaign, within the framework of CRCCH.

7. A phased programme involving the following preparatory activities is recommended at the national level:

- (i) administrative re-organization of CRCCH and formation of an Advisory Committee responsible to the Minister of Culture;
- (ii) adoption of new legislation for the preservation and safeguarding of Ethiopia's cultural heritage;
- (iii) preparation of surveys and gazetting of monuments, archaeological sites, and preservation zones and districts with a view to the preparation of a National Inventory of Ethiopia's cultural heritage;
- (iv) organization of a comprehensive information and propaganda campaign on the cultural heritage by setting up various ad hoc working groups under the direction of the "Technical Service Committee" formed for this purpose;
- (v) inception of detailed planning of high-priority projects along the lines recommended in this report.

8. An exchange of letters between the Director-General of Unesco and the Government of Ethiopia will constitute the legal basis for carrying out the Campaign on the basis of the plan of action. After the Director-General has officially launched the appeal for the International Campaign, a circular letter will be sent to all Member States, Associate Members and other appropriate institutions inviting them to contribute to the Campaign.

9. The main objectives of the present Master Plan are to assist the Ministry of Culture to halt the process of deterioration of Ethiopia's priceless national heritage, and to assess the scale of work required for its preservation. However, the overwhelming diversity of Ethiopia's ethnic groupings, languages and cultural manifestations over a period of nearly three thousand years make any presentation of the cultural heritage a daunting enterprise. Within its present-day boundaries, Ethiopia far exceeds the combined area of Norway, Denmark, Sweden, and Finland, or of France, Spain and Germany. The total population may conservatively be estimated in excess of 31 million speaking more than 70 different languages, each reflecting individual cultural traits. The indigenous building tradition varies from region to region, and the mere existence of about fifteen thousand churches and monasteries exemplifies the tremendous magnitude and complexity of the task involved in preserving Ethiopia's widely diversified cultural heritage.

10. The present study is restricted to selected monuments and sites located in only five geographical areas: Aksum, Lalibela, Lake Tana, Gondar and Harar, each of which has played an important part in shaping the identity of present-day Socialist Ethiopia, as well as being the main centres of cultural tourism.

11. The Centre for Research and Conservation of Cultural Heritage (CRCCH) needs to be expanded and suitably equipped and staffed to enable it to assume full responsibility for the preservation of monuments and sites, and for presenting the cultural heritage in temporary and permanent exhibitions.

12. This is not a task which can be accomplished easily in five or ten, or even more years, during a period of drought, famine and economic constraints generally. But essential foundations have been laid over a long period of international assistance going back to 1967, by identifying the most important sites and monuments, by heightening national and international awareness of the importance of the heritage, by creating administrative machinery for its protection within the Ministry of Culture, Sports and Youth Affairs¹ and by providing basic in-service training for national staff in various fields of cultural heritage preservation. And there should be no doubt that the monuments in question and the problems involved in their conservation merit continued international concern.

13. The very wealth of Ethiopia's cultural heritage and the magnitude of the task involved in preserving it make it essential to mobilize the support of the international community. This was first acknowledged by the General Conference of Unesco at its nineteenth session, held in Nairobi in 1976, which authorized the Director-General to take the necessary steps to prepare a plan of action.

The present Master Plan for the preservation and presentation of the cultural heritage of Ethiopia is prepared within the framework of this Resolution as one further step towards the actual implementation of an International Campaign.

¹ hereinafter referred to simply as the Ministry of Culture.

PART I

BACKGROUND TO THE PRESERVATION OF ETHIOPIA'S CULTURAL HERITAGE

14. International assistance for the preservation and presentation of Ethiopia's cultural heritage goes back to 1967 when Unesco sent an expert to advise on the organization of the Ethiopian Antiquities Administration. Later consultancy missions concentrated on the restoration of sites and monuments likely to attract tourists from other countries and thus contribute to Ethiopia's economic development.
15. In selecting sites and monuments for restoration, priority was given to those easily accessible from tourists' places of arrival, (e.g. Addis Ababa and Asmara), or included on the "Historic Route", assuming that they would be among the first to be provided with hotel facilities of an international standard.
16. The report prepared by Sandro Angelini in 1971, entitled "The Historic Route Monuments", concentrated on the main tourist attraction areas of Aksum¹, Lalibela, Gondar, and Lake Tana.

The restoration programme he proposed was estimated to cost a total of US \$1,721,422 spread over three years, with a UNDP component of US \$857,377, while the Ethiopian Government's contribution would amount to the equivalent of US \$864,045. This ambitious work plan was never carried out, but the Angelini report still remains the basic reference work, the survey drawings providing a most important source of information, and it also prompted the Ethiopian Government to request Unesco's continued assistance at the seventeenth session of the Organization's General Conference, held in 1972.

17. A subsequent report by B.S. Burrows in 1974 evaluates the programme proposed by S. Angelini and other work necessitated by subsequent events, but the budget proposals are more modest and realistic. It was the starting point for project ETH/74/014, Preservation and Presentation of Selected Sites and Monuments (Project ETH/74/014).

18. This project, carried out by the Ministry of Culture with the financial assistance of the United Nations Development Programme (UNDP) and the technical co-operation of Unesco, has been the most important international contribution to the preservation of Ethiopia's cultural heritage. It began in August 1975 and terminated in July 1982 with the departure of the last Unesco expert. The Government's contribution amounted to the equivalent of US \$1,203,170, while the UNDP allocation totalled US \$715,587.

19. The project's long-term objective was to assist the Government in continuing and further developing the programme for the conservation and development of sites along the "Historic Route", as part of the country's cultural heritage, and to contribute to the overall economic growth of the country through tourism. Its immediate objectives were stated as follows:

¹ also spelt Axum

- (i) Inventory programme: to establish an up-to-date and complete basic documentation of the sites and monuments in question;
- (ii) Training programme: enhance the capabilities of the Ministry of Culture in the administration and surveying of the sites and monuments by practical in-service training followed by International Fellowships;
- (iii) Work-planning programme: establish a general plan for the work of restoration and presentation of sites and monuments. The plan should provide for building restoration as well as painting restoration to be done;
- (iv) Administrative programme: promote an infrastructure within which the various and numerous activities of surveying sites and monuments can be organized to maximum practical effectiveness;
- (v) Conservation laboratory programme: increase the capability of the painting restoration laboratory to supply relevant services, by the provision of necessary equipment and training in the use of such instruments and by organization of the administration, productivity and quality control of the laboratory.

20. Project activities centred largely on the establishment and operation of the Centre for Research and Conservation of Cultural Heritage (CRCCH), set up by the Ministry of Culture in early 1976; on the restoration of selected sites and monuments, for which pilot projects were carried out to test possible solutions to various technical problems of restoration; on the planning of a conservation laboratory; on the preparation of photographic records of sites selected for restoration; and on various training programmes.

21. The various reports prepared by short-term consultants recruited by Unesco under the project are listed in Annex III of the present report. Project findings and recommendations are set out in the terminal report on the project, issued by Unesco in December 1982 (see item 17 of Annex III).

22. The implementation of the scheduled work programmes was hampered and delayed by various factors, including the shortage of trained professional staff and economic constraints. The need to create a more effective administrative framework to co-ordinate all work of conservation and preservation was emphasized repeatedly as a pre-requisite for the success of future programmes, and more particularly for the launching of an International Campaign. The terminal report concludes with the following recommendation:

"For consolidation, further development and utilization of project results, it would be helpful if the Centre for Research and Conservation of Cultural Heritage (CRCCH) were to:

- (a) Ensure that, in its future activities, its own role is clearly defined and its capabilities accurately assessed, and that

national inputs, human and material, are soundly planned;

- (b) maintain close contact with relevant international organizations and encourage further bilateral participation, especially in connection with technical assistance and training in architectural restoration. It is recommended that means be sought to continue technical assistance until the International Campaign is producing results;
- (c) promote national interest in preserving and presenting Ethiopia's historic sites and monuments, not only by mass media and education, but by affording also opportunities for popular participation in studies and practical activities."

International principles and practices

- (a) Unesco conventions and recommendations for the protection of cultural property, with special reference to the Convention concerning the protection of the World Cultural and Natural Heritage.

23. Successive sessions of the General Conference of Unesco have adopted three conventions and ten recommendations for the protection of cultural property, all of which are listed in Annex V of the present report. Conventions require ratification by a certain number of Member States before they come into force. Although the recommendations are not subject to ratification, the mere fact that they have been adopted entails obligations for Member States. Ethiopia has ratified the Convention concerning the Protection of the World Cultural and Natural Heritage, which came into force in 1975.

24. Application of this Convention is the responsibility of an inter-governmental committee, which identifies the natural and cultural sites to be protected, on the basis of proposals put forward by the Member States themselves. Sites approved by the Committee are placed on the World Heritage List and made known throughout the world. If necessary, technical assistance for the safeguarding of sites is financed from the World Heritage Fund.

25. The Government of Ethiopia has nominated a number of outstanding cultural and natural sites for inclusion on the World Heritage List, and the following have so far been approved by the World Heritage Committee on the dates indicated:

- (i) Simien National Park, Begemdir Region, 8 September 1978
- (ii) Lalibela, Rock-hewn churches, Lasta District, Wollo Region, 8 September 1978
- (iii) Fasil Ghebbi and other monuments of the Gondar style, Gondar Region, 26 October 1979
- (iv) Lower Valley of the Awash, Palaeontological and pre-historic sites, Wollo and Harar Regions, 5 September 1980
- (v) Tiya, Proto-historic site of Soddo, Shoa Region 5 September 1980.

- (vi) Aksum¹, Historical and archaeological sites, Tigrai Region, 5 September 1980
- (vii) Valley of the Omo, Palaeontological and prehistoric sites, Gemu Gofa Region, 5 September 1980.

26. By including these sites and monuments on the World Heritage List, the Ministry of Culture and the World Heritage Committee have committed themselves to safeguarding some of the most representative examples of Ethiopia's cultural and natural heritage.

27. The Aksumite cities of Yeha, Adulis and Matara in the Tigrai Region, together with the prehistoric site of Melka-Konture in the Shoa Region, were likewise nominated by Ethiopia, but approval of these applications was deferred until the Ethiopian Government has submitted an inventory of all the sites which it intends to nominate.

28. The World Heritage Fund has so far financed the provision of equipment and expertise for a photogrammetric survey of the rock-hewn churches in Lalibela, including overseas training for two land surveyors in terrestrial photogrammetry (see paragraphs 305 to 309 of the present report).

International intergovernmental and non-governmental organizations concerned with the preservation of the cultural heritage.

29. Affiliated to Unesco are specialized international agencies such as the Centre for the Study of the Preservation and Restoration of Cultural Property in Rome (ICCROM), the International Council on Monuments and Sites (ICOMOS), and the International Council of Museums (ICOM), all of which provide assistance to developing countries in protecting their cultural heritage. Ethiopia's membership of these organizations implies adherence to the basic principles and practices of preservation of the cultural heritage.

- (i) The Rome Restoration Centre (ICCROM, an intergovernmental organization founded in 1959) runs a series of advanced training courses for specialists in various fields of cultural heritage preservation: (i) architectural conservation, (ii) mural paintings conservation, (iii) conservation science, and (iv) courses in security, climate control and lighting in museums. The centre also provides expert advice to Member States on all aspects of conservation, in co-operation with Unesco.

In January 1976 Ethiopia became a member of ICCROM which has provided post-graduate training for one Ethiopian architect-restorer and one painting restorer and consultant services for the conservation of mural paintings in the church of Debra Berhan Selassie, Gondar, within the context of the UNDP/Unesco-assisted project ETH/74/014.

¹ also spelt Axum

- (ii) ICOMOS is an international non-governmental organization founded in 1965 to promote the principles embodied in the International Restoration Charter (commonly known as the Venice Charter), which was adopted by the Second Congress of Architects and Specialists on Historic Buildings held in Venice in 1964. Since this Charter admirably sums up the principles which should govern the preservation of monuments and sites, it is reproduced in Annex VI of the present report.
- (iii) The International Council of Museums (ICOM, founded in 1946) is a specialized non-governmental organization dedicated to furthering international links between museums and to assisting Member States in the development of national museums.

Initial preparations for an international campaign.

30. The historical monuments and sites of Ethiopia rank among the most outstanding in Africa and are an important part of the cultural heritage of mankind.
31. At its nineteenth session, held in Nairobi in 1976, the General Conference of Unesco, on the proposal of the Ethiopian Government, adopted Resolution 19 C/4.126, which authorized the Director-General to take the necessary steps to prepare a Plan of Action for the preservation and presentation of the cultural heritage of Ethiopia, and to undertake, under the auspices of Unesco and in collaboration with the Government of Ethiopia, a campaign to mobilize international solidarity. Subsequent sessions of the General Conference have continued this initial commitment.
32. While the bulk of the work involved in carrying out the Campaign will be the responsibility of the Government and people of Ethiopia, in accordance with the policy of self-reliance (Ethiopia-Tikdem), the Campaign is intended to inspire a movement of international solidarity and technical co-operation, to help finance facilities which are lacking in the country, to make available international experience and fellowships, and to make the unique history and culture of Ethiopia better known to the world at large.
33. In 1978, a preliminary draft Plan of Action for an International Campaign was prepared for the Ministry of Culture by Berhanu Abebe, then head of CRCCH, and Erik Olsen, the Chief Technical Adviser of project ETH/74/014.
34. After almost a decade of preparatory work the time now seems ripe for vigorous implementation of the recommendations of pertinent previous reports. The Government of Ethiopia for its part has clearly intimated that it will, by all available means, work for socio-cultural development and the strengthening of the country's cultural identity.
35. The formation of a National Committee for the Preservation of Ethiopian Antiquities was announced on 22 April 1984. The inter-ministerial

committee comprises the Ministers of Culture; Information and National Guidance; Foreign Affairs; and Education; the Commissioner of Hotels and Tourism; the President of Addis Ababa University; and a representative of the National Revolutionary Development Campaign and the Central Planning Supreme Council.

Government contribution to the Campaign.

36. Ethiopia's Social and Economic Development Plan for 1985 - 1995, covering successive periods of two, three and five years, was being reviewed by the Government and the Planning Supreme Council during the consultant's mission. It was not possible to obtain any precise estimate of expenditure for proposed development. Plans include the construction of new premises for a conservation laboratory at an estimated cost of 7 million Birr. It was reported that 150,000 Birr were earmarked for the preliminary design to be entrusted to the Ministry of Construction. It was not possible to verify tentative suggestions for the construction of a new National Museum.

37. The Government's contribution to the International Campaign should cover the following expenditures:

- (i) Construction of new premises for the conservation laboratory.
- (ii) Salaries for all national manpower, including the administrative and technical staff and manual labour required.
- (iii) Purchase of locally available materials and equipment.
- (iv) Office accommodation, travel and secretarial assistance for international and bilateral experts.

38. The Ministry of Culture has also expressed its intention to initiate a National Campaign so as to raise an additional amount of 10 million Birr over the ten-year period scheduled for the campaign. For this purpose it is planned to set up an ad hoc Service Committee with the following terms of reference, as outlined by the Ministry of Culture:

- (i) Preparation of reports, publications, films and exhibitions about Ethiopia's cultural and historical heritage.
- (ii) Radio and television discussions on Ethiopia's cultural and historical heritage, in which appropriate specialists would be invited to take part.
- (iii) Use of the radio and television to foster in the population as a whole a keener awareness and understanding of the nation's historical and cultural heritage and to stimulate their creative activity.
- (iv) To popularize the heritage and historic sites and monuments among the masses, and thereby enhance the campaign.
- (v) Printing of stamps illustrating Ethiopian historical sites and monuments.

39. It is recommended that the Committee be empowered to initiate such other activities as may be deemed useful for fostering a greater awareness of Ethiopia's cultural heritage.

40. It is proposed that the committee will have the following permanent members: the Head of CRCCH (chairman), the Director of the Institute of Ethiopian Studies, Addis Ababa University; the Head of the History Department, Addis Ababa University; the Secretary-General of the National Agency for Unesco; the Manager of the Film Centre; the Head of the Ethiopian Television Service; and the Head of the Foreign Relations Section, Ministry of Culture.

General Factors to be taken into account during the Campaign

(a) Socio-economic conditions

41. Ethiopia is listed among the 25 least developed countries of the world in terms of modern technology. Furthermore, for over a decade it has been stricken by droughts with resultant food shortages more particularly in the four northern provinces of Eritrea, Tigray¹, Wollo and Gondar. Little or no rain in 1984 has doomed many thousands to starvation, and the situation is exacerbated by soil erosion due to a combination of poor cultivation techniques and overgrazing on already steeply sloping land.

42. In view of this serious socio-economic situation a realistic and functional approach must be adopted for the conservation of the cultural heritage, which should in no way impede the struggle for better living conditions.

(b) Revival of traditional crafts and skills

43. Although no census has yet been taken, it is estimated that the population of the country now exceeds 31 million of whom close to 90 percent live in rural areas on subsistence agriculture.

44. Under these circumstances, the preservation of the cultural heritage and expansion of museums should be geared to make the maximum contribution to general social and economic development, especially with regard to the agricultural sector, handicrafts and small-scale cottage industries.

45. In the very process of social and political change it is of vital importance to ensure continuity with the past which has shaped the national identity. Traditional crafts and cultural expressions in their various forms should be kept alive as a unique source of inspiration for future self-reliant development. An excellent example has been set by the "Handicrafts and Small-Scale Industries Development Agency" (HASIDA), which actively supports the Government's policy of mobilizing indigenous skills and capital resources through co-operative work.

¹ Variant spellings for Tigray are Tigre, Tigré

46. Such development can be promoted by research into, and the presentation of the cultural heritage in provincial museums. Maximum use should be made of temporary and travelling exhibitions and similar promotional activities, which can reach as large a proportion of the population as possible and thereby contribute to social mobilization. For example, the display of traditional agriculture and crafts, alongside examples of modern farming methods and technical skills can be valuable visual aids in the campaign for modernizing agriculture and village technology, which are the basis of Ethiopia's largely rural society.

47. Many such initiatives can be taken at the regional level by provincial museums, or they can be arranged in conjunction with other nation-wide campaigns, such as the mass literacy programme launched in 1979, which not only inculcates literacy, but also spreads new political ideas among the population.

(c) Respect for cultural diversity

48. Ethiopia is a veritable mosaic of races, tribes, and linguistic groups - "an ethnic museum" as Carlo Conti Rossini¹ put it.

49. The Provisional Military Administrative Council has stated that a major element in its policy is the recognition of the various nationalities in the country: "No nationality will dominate another one, since the history, culture, language, and religion of each nationality will have equal recognition in accordance with the spirit of socialism"².

50. A basic element in the process of establishing a cultural identity is the use of nationality languages. This is demonstrated by the current literacy campaign which, for practical reasons, has nevertheless been carried out in only 15 national languages.

51. Tolerance for ethnic differences and the respect of one group for another with different customs help people to adapt to necessary changes and to accept the idea that a part of their autonomy must be sacrificed in the interest of building the nation as a whole.

(d) Development of regional museums

52. The tremendous diversity of peoples and cultures is surely the most conspicuous feature of Ethiopia's cultural development. Each group or tribe represents a cultural complex of specific traditions, reflected in language, dress, housing, farming methods, etc.

53. Presentation of the cultural heritage therefore calls for the development of regional museums illustrating the cultural and material achievements of each national group in its own right. Cole-King, in his report on "Development of museums and the preservation of antiquities", maintains that "provincial museums should be of a general nature, each covering as wide a range of topics as may be practicable, to give a broad pattern of the country's natural and cultural heritage. The present bias towards ethnography

1 Carlo Conti Rossini: Storia d'Etiopia, Milan, 1928.

2 Basic Documents of the Ethiopian Revolution, Addis Ababa 1977, pp. 13-14.

and archaeology needs to be balanced by more attention to natural history, and science and technology...The museums in Addis Ababa are of a more specialist nature, the National Museum concentrating on archaeology and modern art, the Museum of the Institute of Ethiopian Studies on ethnography and traditional art...They represent the national centres for their particular fields to which the provincial museums can look for assistance... There is a tendency in African countries to concentrate on having one larger museum, of a general nature, in the capital. Ethiopia has such a wealth of potential material in all fields that Addis Ababa should continue to follow the pattern of the capitals of Europe, where the tendency is to have several specialist museums." The present consultant concurs with these views.

(e) Priorities in the selection of monuments and sites for preservation.

54. Most of the monuments recommended for restoration in the present Master Plan are already included on the World Heritage List and accordingly qualify for multi-lateral or bilateral assistance for their preservation. Furthermore, they are easily accessible and have a special appeal for tourists and may thus become an important source of foreign exchange for Ethiopia.

55. However, all parts of Ethiopia have an extremely rich indigenous architectural tradition, reflecting the individual character of each ethnic group. Whenever appropriate, the preservation of such traditional, "vernacular" architecture is recommended, not only because it is an integral part of the historic environment, but more especially because it offers a simple, natural solution for housing, using locally available materials and skills. This is considered to be the only realistic way of solving housing needs.

(f) Area conservation

56. The concept of "area conservation" has been adopted in international conventions and recommendations concerning the preservation of the cultural heritage, which provide for such measures as legal protection, zoning, regulations, subsidization, technical assistance, etc. Ethiopia's historic sites threatened by urban development may be protected in various ways, and this report will include specific recommendations for individual sites. Of particular importance is the establishment of close co-operation with the Ministry of Construction, the Ministry of Housing and Urban Development, and the local authorities (Kebeles).

(g) Prerequisites for the success of the campaign

57. The preservation and presentation of Ethiopia's vast cultural heritage necessitates close co-operation between the Ministry of Culture and all other ministries, governmental agencies and authorities, having specialized knowledge, experience and executive authority in the many fields relating to this heritage. The understanding and support of the general public will also be needed in order to mobilize the human resources required for this great endeavour.

¹ Excerpts from pages 9 and 10 of report listed in Annex III, item 7.

PART II

ADMINISTRATION OF THE CULTURAL HERITAGE : ANALYSIS AND RECOMMENDATIONS

Organization of the Centre for Research and Conservation of Cultural Heritage (CRCCH)

58. In 1966, the Government set up the Ethiopian Antiquities Administration which brought various existing functions (e.g. archaeological research, monuments and antiquities, and museums) under one authority. In 1974 the Administration became the Ministry of Culture, with additional responsibility for the arts and all aspects of traditional culture. A further reorganization took place in 1976 with the creation of the Centre for Research and Conservation of Cultural Heritage. This new service originally comprised sections for Archaeology, Anthropology and Palaeontology; Monument and Object Preservation; Museums; and a Service Section including a photographic unit. An Inventory Section was later added (see Table 1 showing the present organization of CRCCH).

59. CRCCH itself has existed for only eight years, which is not long for building up a functional service to the nation's cultural heritage. Considerable practical experience has been gained over this period; above all, it has become clear that, for the successful implementation of a programme on this scale, CRCCH must be accorded administrative and budgetary resources commensurate with its demanding task.

Recommendations for granting more autonomy to CRCCH

60. Experience in the implementation of the UNDP/Unesco-assisted project ETH/74/014 repeatedly proved the need for more effective management of the practical activities undertaken. In particular, correct planning of the manpower resources and supplies needed for carrying out projects has constantly been impeded by the lack of precise information and by CRCCH's own administrative weaknesses. The restructuring of CRCCH as a semi-autonomous body under the general authority of the Ministry of Culture would be an important step in smoothing out administrative difficulties and speeding up the implementation of projects. The reorganization of CRCCH is a matter which calls for a governmental decision and is particularly important in view of the proposed international campaign.

61. In making these administrative changes, the present organizational structure of the Institute of Ethiopian Studies attached to the Addis Ababa University could well serve as a model. They would be in line with current plans for giving a more independent status to the Film Centre and the Ethiopian Language Institute, both under the Ministry of Culture. Greater independence would naturally be subject to administrative changes within CRCCH, for which suggestions will be made under the respective headings (cf. Table 2 showing the proposed new organizational structure of CRCCH).

Suggestions for an Advisory Committee on Preservation of the Cultural Heritage to be attached to the Ministry of Culture

62. In any administrative reorganization and redistribution of responsibilities, full account must be taken of the need for overall coordination between all the Centre's Divisions. Equally essential are close collaboration and coordination with a number of other agencies concerned with the preservation of the cultural heritage (e.g. the Addis Ababa University, the Ministry of Housing and Urban Development, Ministry of Construction, the Ethiopian Orthodox Church, the Muslim communities, the Ethiopian Tourism Commission, etc.).

63. In discharging its responsibilities, the CRCCH should be able to draw upon the advice of an Advisory Committee with representatives from appropriate ministries and institutions, and individual members nominated by virtue of their integrity and personal standing.

64. The Committee might possibly have the following membership:

Chairman (appointed by the Minister)

Vice-Chairman (elected by the members of the Committee)

Secretary (the Director of the CRCCH)

Permanent members:

- Representative of Addis Ababa University
- " " Ministry of Housing and Urban Development
- " " Ministry of Construction
- " " the Peasant, Labour, Youth and Women's Associations
- " " the Ethiopian Orthodox Church
- " " the Muslim Society in Ethiopia
- " " the Tourism Commission
- The Secretary-General of the National Agency for Unesco

Nominated members: 2 to 3

Recommended administrative changes

Management

65. The present Head of CRCCH is at the same time in charge of the Division for Research into the Cultural Heritage. Considering the responsibilities involved in each of the two posts, this cannot be a valid and lasting solution. The CRCCH should be headed by a director assisted by assistant directors to supervise the divisional units and first officers of the various sections. The Director, assisted by a secretariat, would have responsibility for policy-making, coordination of work programmes and preparation of budgets.

66. It would be desirable to plan for a competitive career structure and salary scale in order to attract competent, trained personnel.

67. Branch offices of the Ministry of Culture, established in the capitals of all administrative regions, are concerned with (i) theatre and cinema administration, (ii) public library management, and (iii) preservation of the cultural heritage. Officers for preservation of the cultural heritage are now attached to the Regional Branch Offices in Aksum, Lalibela, Dessie, Gondar, Bahar Dar, and Harar while personnel specially working on the Inventory of Movable Cultural Property is attached to the Branch Offices in Makalle¹, Dessie, Gondar, Jimma, Soddo and Goba.

68. With a total of fourteen administrative regions² there is a great need for professionals with formal training in a wide range of disciplines, who can be responsible for the upkeep, maintenance and protection of cultural property and historic sites and monuments at the regional level.

Archaeological Research Division

69. Archaeological work in Ethiopia was given formal status when an Archaeological Section was established in the Ethiopian National Library in 1952 under a bi-lateral technical assistance agreement with the French Government. Its organization was entrusted to a group of French archaeologists under the direction of J. Leclant, later to be succeeded by Jean Doresse. Scientific papers and the results of archaeological excavations were published in Annales d'Ethiopie. The Library was attached to the CRCCH when it was established in 1976. A French mission consisting of one archaeologist, one philologist and one draftsman now works in CRCCH's Museum Section.

Legal protection of antiquities: the antiquities proclamation, 1966

70. Proclamation No. 229 of 1966 provides for the protection and preservation of antiquities in Ethiopia. It defines "antiquity" as "any construction or any product of human activity, or any object of historical or archaeological interest, having its origin prior to 1850 E.C.³". The antiquities so defined were declared to be "property of the State" to be administered by the Head of the Office of Archaeology. Details of the proclamation and proposals for new legislation are provided in a technical report issued by Unesco in 1981: "Legislation for the safeguarding of the cultural heritage of Ethiopia" (see Annex III).

71. The proclamation was not abrogated after the 1974 Revolution and is therefore still valid. However, apart from the "Export of Antiquities Regulations, 1969", it was not followed up by the detailed regulations indispensable for its execution. Accordingly, a new law and regulations are being prepared to govern the identification, preservation, inventory and inspection of the cultural heritage.

1 also spelt Mekele.

2 the term "province" has frequently been used in English reference works on Ethiopia. The same geographical entity is now often called "administrative region" (cf. The Europa Yearbook 1984. A World Survey). In its nominations for cultural property, the Ethiopian Government uses the term "Region", occasionally "Administrative Region". The present report will occasionally retain the term province but will more often refer to region.

3 Ethiopian Calendar.

Meanwhile, all archaeological field work was stopped in 1982. The new legislation is all the more necessary as foreign archaeological missions, which have been active mostly in the exploration of the pre-history of Ethiopia, have meanwhile been working under agreements with the Ministry of Culture without adequate guarantees that the finds will remain in the custody of the National Museum. Furthermore, no effort has been made to involve and train Ethiopian counterparts, with the result that few Ethiopian archaeologists have been educated so far to assume responsibility for archaeological research and the display in museums of the wealth of palaeontological and prehistoric finds in Ethiopia.

72. The Common Technical Services Division at present functions only nominally as an administrative link between the other Divisions of CRCCH and the Ministry of Culture. All requests from the various Divisions, including the payment of salaries, are forwarded to the Permanent Secretary of the Ministry for approval. They are dealt with by the Ministry's Administrative and Financial Department, and money is allocated monthly by the Ministry of Finance.

73. It is recommended that this Division should become a Secretariat attached to the office of the Director, with responsibility for co-ordinating all CRCCH activities. It would have its own accountancy system, approve purchase orders and be responsible for staff recruitment. The following staff would need to be appointed for this purpose:

- 1 chief administrative officer
- 1 cashier
- 1 accountant
- 1 driver
- 1 property clerk

The Photography Section

74. The Photography Section of CRCCH has built up a large collection of about 20,000 colour slides and 50,000 black-and-white negatives. This photographic documentation is of inestimable value for future research on Ethiopia's cultural heritage, and needless to say the Section should be offered the best possible working conditions. Most of the photographic equipment now needs to be renewed, the storage facilities are most unsatisfactory, and the Section now has no space for studio facilities.

75. In future development plans, better premises will need to be provided for the Section, which could be grouped with the planned Conservation Laboratory in a Technical Services and Conservation Division.

The Inventory and Inspection Division

76. This Division was established in 1978 with responsibility for building up an inventory of cultural property, which is classified by region under the following headings:

- I. Historical Buildings and Monuments
- II. Historical Places and Natural Sites
- III. Paintings
- IV. Books and Documents
- V. Works of Art and Crafts, both ecclesiastical and secular
- VI. Archaeological Sites and Findings.

77. Each item is given a serial number, and the relevant information, consisting of a brief description and a photograph the negatives of which are kept with the Photographic Section, is set out on two hectographed pages of ordinary paper.

78. The inventory programme is carried out mainly by high-school graduates, who have merely picked up a basic knowledge of the cultural heritage on the job. With a total of 14 administrative regions, there is a great need for professional staff with formal training in a wider range of relevant disciplines. Staff now working on the inventory of movable cultural property is attached to the Ministry of Culture's Branch Offices in Makalle, Dessie, Gondar, Jimma, Soddo and Goba.

79. It is recommended that a clear distinction be made between the inventory of monuments and sites and that of movable cultural property, because the two fields require quite different professional training if the entries are to be anything more than a mere list of objects.

80. As a legal protective measure and for planning purposes it would be valuable to have a complete inventory of cultural property throughout the country, but in the long term it may well be advisable to split up the Division as follows: (i) The Inventory of Movable Cultural Property would be entrusted to the Museum Division and prepared by officers trained in such fields as art history and museology. The field personnel would then be appointed as permanent staff members of the Regional Museums. (ii) The Monument Inventory should possibly be entrusted to the Monuments and Sites Preservation Division, and be staffed mainly with professional architects qualified to make survey drawings and prepare technical descriptions of buildings. The purpose of the inventory should be to establish and maintain a National Building Register of historic buildings. This section should likewise be responsible for building up a detailed Photographic Library of building history closely linked to the Photographic Section and the Research Library of CRCCH.

Division for the Preservation of Monuments and Sites -
Project Section

81. The Project Section is responsible for the upkeep and maintenance of buildings. Its future work will be the general planning and administration of all the major conservation projects in Ethiopia.
82. The present Section's professional staff is based in Addis Ababa, with short periods of work in the field. It would be highly desirable to improve living conditions for this Section's staff during periods of field work so as to counteract the present tendency to prefer office to field work. Greater encouragements would help to retain good staff - an important consideration for the success of the future Campaign.
83. The standard of work would certainly be improved by the posting of a responsible architect-restorer at each of the major historic sites, where restoration or maintenance work will be constantly in progress, especially in Gondar, Harar, Aksum, and Bahar Dar.
84. Preparation of an inventory of buildings is recommended as the Section's most urgent task for the immediate future. Only when a fairly complete record (i.e. photographs or drawings and descriptions), of all cultural property is available will it be possible to know the full extent of the work to be done and to plan protective measures at the national level. Timely maintenance forestalls the need for major restoration work and greatly reduces the overall cost of conservation. For this reason all historic buildings should be inspected at regular five-year intervals, and each building and site should have its own file containing all relevant data, readily available for consultation by anybody in need of the information.
85. At present, the Section's filing system is defective and modes of co-operation with the Inventory and Inspection Division have not been clearly defined.
86. It is recommended that the Inventory and Inspection Division should be responsible for maintaining and up-dating the inventory of historic buildings in the National Building Register (e.g. all original survey drawings and descriptions of buildings) and for providing copies on request; while the Monuments and Sites Division should retain a copy for office use together with all information of a more technical character specifically related to the restoration and upkeep of buildings.

Conservation Laboratory for Cultural Property

87. The idea of establishing a Regional Centre for Conservation of Cultural Property in Addis Ababa goes back to 1975 when H.J. Plenderleith prepared an outline plan under contract with Unesco. The proposed Centre was to serve the dual purpose of providing professional staff and laboratory facilities for the conservation of works of art at the national level and later develop into a training institution for technicians from other East African countries.

The Ethiopian Government was then strongly in favour of having the proposed laboratory located in Addis Ababa, and in order to co-operate in its establishment the government at that time proposed to provide adequate buildings - possibly in the vast compound of the Grand Palace of Menelik, which was considered for allocation to the Ministry of Culture and the National Museum.

88. In 1977 a consultant was provided by Unesco to advise on the restoration of works of art in the Ethiopian National Museum.¹ The small laboratory which was set up during his two-month mission was the first step towards the creation of a National Conservation Laboratory, which was then estimated to be fully operational within five years provided it had adequate financial support. Assuming that the building and the required personnel would be provided by the Ethiopian Government, the necessary financial assistance for equipment and laboratory apparatus was then estimated to be in the vicinity of US \$20,000, which at today's prices would amount to about US \$39,000, allowing for an annual price increase of 10 per cent.

89. The Ethiopian Government has recently reiterated its preparedness to set up an East African Regional Research Centre for Conservation of Antiquities, and it is understood that a sum of 150,000 Eth. Birr has been budgeted for the preliminary design of the premises by the Ministry of Construction. The total cost is estimated at 7 million Birr; the actual construction is expected to take three years starting in 1985.

90. It is a matter of urgency that an architect's brief be carefully prepared in consultation with all the parties concerned before the actual design is started. Problems relating to the future siting of the various sections of CRCCH and to museum developments generally should be settled before the construction of a conservation laboratory building, which will be closely linked with the future museum organisation.

91. If the current plans are carried out as scheduled and a new building is completed by 1988, there are only three more years in which to train the staff needed to run the conservation laboratory. It is a matter of urgency to identify and appoint a candidate qualified to run the laboratory and to assume responsibility for furnishing and equipping it.

92. It is recommended that the Ministry of Culture seek further expert advice for the development of the laboratory. Meanwhile, basic equipment for the restoration of mural paintings is urgently required.

Recommendations for co-operation with the Fine Arts School,
Addis Ababa

93. The Fine Arts School is a higher educational institution under the administration of the Ministry of Culture's Department of Fine Arts, Theatre and Cinemas. The school offers four years of post-graduate

¹ See Item 8 of Annex III

training in arts and crafts, including a general two-year programme followed by two years' specialization in either Graphic Design, Sculpture or Easel Painting, mainly related to modern arts.

94. However, interest has been expressed in the study of traditional Ethiopian painting techniques, including restoration of mural paintings, which could eventually be included in the School's curricula.

95. The consultant had informal discussions on the subject with the Head of the school. The third-year syllabus in easel painting could possibly set aside one to three months for practical in-service training in restoration of mural paintings. The students, after preliminary training in the relevant working methods, could then assist in restoration work under the supervision of professional restorers of paintings. The only extra cost for the Ministry of Culture would be payment of travel expenses and per diem to the students and the participating teachers. A few very dedicated and gifted students could be encouraged to specialize in mural painting in their final years of study, with the prospect of being appointed by the CRCCH after graduation.

96. To help launch this scheme, the Ministry of Culture may wish to seek International assistance to the Fine Arts School (about three to four months for two successive years) for preparation of the actual course and supervision of field work together with CRCCH's permanent staff.

Prospects for future development

97. This pilot project may be the starting point for the development of a formal course in traditional arts and crafts at the School of Fine Arts, which could be extended to cover such specialized fields as illuminated manuscripts (graphic design) and traditional techniques of casting and moulding (sculpture).

98. Present plans for establishing a Regional Conservation Laboratory in Addis Ababa to train Ethiopian and East African technicians in restoration work open up promising prospects for co-operation between these countries and the exchange of experience, teaching staff and equipment, at least in the initial stages.

Ethiopian Manuscripts Microfilm Department

99. An Ethiopian Manuscripts Microfilm Library was established in 1973 as an independent institution by the Ethiopian Orthodox Church, with expert assistance and economic support from North American Universities¹, which provided the equipment and defrayed the expenses of the building. After the 1974 Revolution, the Institute was taken over by the Ministry of Culture which has maintained it as a separate Department, with a present total annual budget of 150,000 Eth. Birr covering current expenses and new acquisitions.

1 A joint venture of Vanderbilt University Divinity School, Nashville, Tennessee; St. John's Abbey and University, Collegeville, Minnesota; and The Ethiopian Manuscripts Microfilm Library, Addis Ababa.

100. The Department is concerned mainly with microfilming books and manuscripts on parchment and keeping a microfilm library collection, which can be consulted and where extra copies of the microfilms can be requested by individual researchers or university institutions, prepared to pay for the assignment order. Material is classified according to the place of origin and to the date of the manuscript, which, in the absence of field equipment, has to be taken from the church and brought to Addis Ababa for microfilming. This practice involves a risk to quite invaluable documents, and there is an understandable reluctance by the priests to give away their possessions, even for a short time.

101. The enormous number of ancient documents on parchment found in Ethiopia makes it necessary to give priority to unique and rare copies, while a systematic inventory necessarily has to be postponed until it can be undertaken by the Inventory and Inspection Division of CRCCH.

Recommendations for co-operation with CRCCH

102. The illuminated parchments, which have been zealously treasured by the church for so long, are now becoming increasingly threatened by common wear and tear in combination with bio-climatic decay under unsafe depository conditions, so that the completion of a microfilm inventory programme has become a matter of grave concern.

103. It is particularly recommended that the necessary funds be made available for the purchase of equipment, so that the microfilming programme can be completed more safely and efficiently in the field. A transportable field unit complete with camera, electrical power generator and provision for film development, including regeneration of flushing water, could be specially designed for this purpose¹.

104. There may also be a future need for a micro-printer and a reader printer but the high initial cost and maintenance expenses do not make this a matter of high priority as this work may be more advantageously completed on special contract with a university institution abroad.

The Museums Division of CRCCH

105. Although the organization of museums is not the primary concern of the present Master Plan it would obviously be unrealistic to neglect this field, which is of crucial importance for all work relating to the preservation and presentation of the cultural heritage. For this purpose a general survey of museums in Addis Ababa is now given.

¹ A precedent can be found, for example, in the dental clinics used in many third-world countries, adapted to a portable container.

National Museum

106. Ethiopia's National Museum is housed in two buildings in King George VI Street. (i) The Old Museum Building was constructed in 1935 during the Italian occupation as the residence of the Italian Mayor of Addis Ababa. The building had various functions before it was vacated by the Ministry of Foreign Affairs in 1967 and converted into a National Museum.

107. It is a handsome and spacious building with some interesting historic qualities, which add to its usefulness as a museum. At present it houses only a rather meagre collection of ethnographic exhibits, royal garments and furniture, together with a selection of contemporary Ethiopian art and the preparatory sketches by Afewerke Tekle for the large, polychrome glass mosaic in the Africa Hall Building. But all the material is rather haphazardly arranged.

108. (ii) The New Museum Building was designed and erected under the responsibility of the Ministry of Construction during the years 1978 to 1981, and advice on the arrangement of the exhibition galleries was offered by a Unesco consultant during a two-month mission in 1980¹. The building was planned to house an exhibition on palaeontology and pre-history on the ground floor, archaeology on the first floor and ethnography on the top floor, while the basement was planned for working offices, a lecture hall and the display of modern art. Each floor covers about 700 square metres, making a total floor area of some 2800 square metres.

109. The whole structure has been left unfurnished and unused and it is now in need of cleaning and redecoration before any exhibitions can be mounted. Current problems with a leaking roof and percolation of rain-water into the outer walls indicate that there are built-in structural defects which have to be remedied. The design has other shortcomings which may pose a problem for the building's future use, especially with regard to security, control of light and humidity, and lack of storage space.

110. It may be necessary to arrange for a controlled entrance/lobby area before the public enters the exhibition area. Such a "buffer zone" may also make it possible to install dehumidifying equipment to control humidity inside the building during the rainy season. The glare from the sky and ultraviolet radiation are particularly troublesome in the basement and on the ground-floor level, where it will be necessary to install some light-control devices. With regard to storage and service areas, it is generally considered that museums need the same floor area for this purpose as for the exhibition proper. This space will have to be provided elsewhere close to the museum, possibly combined with premises for a conservation laboratory.

111. There are various auxiliary buildings within the museum compound. One annex to the old museum at present houses archaeological finds and a laboratory, which was originally established with the assistance of a Unesco consultant².

¹ See Annex III, item 13

² Restoration of Works of Art in the Ethiopian National Museum, Paris 1977.

112. A new one-storey building, constructed with USAID funds, was completed in 1972 at a cost of 70,000 US dollars. It was intended to house a centre for palaeontological research and the conservation of fossil finds. Similarly, the French Government has expressed its willingness to provide funds for the construction of new premises to house the French Archaeological Mission in Ethiopia, but all bi-lateral agreements have been in abeyance pending the drafting of new legislation on the preservation of the cultural heritage and adoption of a new Government policy. The central location of the National Museum is ideal and the large compound allows adequate scope for future extensions, but it suffers from the lack of any coherent development plan.

113. It must be admitted that the present state and general arrangement of the National Museum fall far short of what one normally expects of such an institution.

Museum of the Institute of Ethiopian Studies

114. This museum is housed on the first floor of the former Quenet Leul Palace, next to the Library of the Institute of Ethiopian Studies within the Addis Ababa University Campus. It is an independent research institute under the authority of the Commissioner for Higher Education, while its activities are co-ordinated by a Research and Publication Committee, which is responsible to the Senate of the university.

115. The collection has been built up by professor Stanislaw Chojoracki with funds provided by the Society of Friends of the Institute of Ethiopian Studies.

116. The exhibition consists of a splendid collection of ethnographic material, traditional paintings, liturgical craftsmanship, and ecclesiastical art, arranged in a systematic and orderly display. Unfortunately, it is not very well known to people outside the university or to tourists, who have difficulty in finding the place.

Development of regional museums

117. There is still a long way to go before each administrative region and major town has its own museum to document the region's various traditional cultures.

118. Regional museums exist primarily in order to meet the needs of the local population and should be planned and organized mainly to help them understand their own cultural and material achievements; they can thus become a means of establishing cultural links and promoting understanding between the various ethnic groups in the country.

119. Such museums should be both stimulating and enjoyable, functionally well designed and having a direct appeal.

120. Responsibility for the establishment and management of museums will rest mainly with the Museum Division of CRCCH, but modest economic support and encouragement may help small community groups to set up their own museum on their own initiative, as has been so excellently demonstrated in Harar. This town's small community museum may serve as a model for regional museums elsewhere in the country, where indigenous buildings can provide a natural and inexpensive setting for a museum exhibition appealing to the local people.

Development of National Museums

121. The present museum in Addis Ababa is still at an initial stage of development and cannot yet claim the stature of a National Museum. This situation, however, leaves open the possibility of reshaping museum policy.

122. In 1975, Cole-King wrote¹ in his report on Development of Museums and the Preservation of Antiquities that it was premature to put forward detailed recommendations covering all aspects of museum development because of the great number of variable factors: "It is, for example, likely that some or all of the former Imperial Palaces throughout the country will be handed over to the Ministry of Culture for use as museums and libraries, but until decisions on this, and any other possibilities that may arise, are finally taken, effort should be concentrated on training". The time may now be ripe for a discussion on the future direction of museum development, in contrast to recent proposals for constructing a completely new building for the National Museum.

123. Planning the development of a museum, as of any other building of public importance, is bound to assume political dimensions. Each of the many interested parties views the problem from a different angle, but some sort of consensus will have to be sought if a viable and economic solution is to be found.

124. The two main options are: concentration of resources on one museum only or the creation of a series of museums, each of which would be one part of a National Museum planned as a comprehensive whole. The latter alternative appears preferable. If adopted, energies should then be directed in the immediate future towards the creation of three museums (i) an Ethnography Museum, (ii) an Archaeology Museum, and (iii) an Open Air Museum for Folk Art. A long-term possibility may be the adaptation of one of the former Imperial Palaces for use as a National Museum. Equal attention should be given to the establishment of natural science museums elsewhere in Addis Ababa and the provinces.

125. The ethnographic museum of the Institute of Ethiopian Studies is well established with a rich, representative collection of ethnographic material from all parts of the country, which would argue in favour of directing more resources to this museum as the principal ethnographic museum. Furthermore, the Institute has a long tradition in research, field collection and documentation as well as a fine library collection.

¹ See Annex III, item 7.

The Museum for Archaeology and Early Man

126. There is no doubt that the existing "National Museum" compound with its different buildings is in need of a coherent overall development plan. As mentioned in paragraph 87 above, the construction of a new Conservation Laboratory within the compound is planned, but it is most important that the new premises should harmonize with the existing structures so as to form a functional and architectural whole.

127. The new building referred to in paragraph 108 above could, after certain alterations, be used as a Museum for Archaeology and Early Man, to display the great wealth of palaeontological and prehistoric finds. By specializing in one field only, the museum would have ample space for storage and research facilities which are so badly needed at present.

128. The present "National Museum" could possibly house all the Divisions of CRCCH, thus alleviating the inconveniences now created by having them scattered in various parts of the city. However, the available information on space requirements is not precise enough to know whether this is a feasible proposition. A thorough study is needed, taking all possible arrangements into consideration.

Open-air museum for Folk Art

129. The creation of open-air museums with representative, indigenous buildings from various parts of the country, complete with furniture and tools, has proved extraordinarily rewarding in many parts of the world in recent decades as a means of displaying traditional folk art and material achievements. The idea of the moving of individual buildings was first carried out in Scandinavia at the end of the nineteenth century and has now proved to be an effective way of conserving traditional methods of building and of attracting the general public.

130. A modest attempt along these lines is to be found within the compound of the "National Museum", where a traditional Sidamo house of impressive size has been re-constructed. This building looks rather out of place surrounded by modern structures which spoil the effect of this fine example of Sidamo architecture.

131. However, Ethiopia, which has such a fascinating variety of traditional buildings, could display them to great effect in a suitable area within easy reach of the city dwellers who may not otherwise be familiar with building traditions in other parts of the country.

132. The Wolde Maskal Memorial House, in which the Ethno-Museology Section of the Institute of Ethiopian Studies is located behind the Menelik Palace, is set in an area of about 6000 square metres which may well provide a suitable setting for an open-air museum. It was recently estimated that a total of ten traditional houses could be erected here at a cost of some 200,000 Birr. To this should be added expenses for landscaping and the construction of visitor amenities and an information centre.

133. Such a simple and unpretentious approach to the presentation of Ethiopia's heritage of buildings from various parts of the country would have far more appeal than a sophisticated modern museum. Entrance fees and the sale of craft products could make the open-air museum self-supporting within a relatively short period of time.

The national palaces

134. Suggestions are put forward in this report for the preservation and presentation of the most important historical sites which are considered to be representative of the various periods of Ethiopian history, notably Aksum, Lalibela and Gondar. There is a world-wide trend to convert former palaces into museums for the general public (e.g. the Kremlin in Moscow and the Louvre in Paris). Similarly, some of Ethiopia's former Imperial Palaces would provide ideal settings for museums which would greatly appeal to the people of Ethiopia and foreign tourists.

135. The Menelik Palace was considered for museum purposes in 1974 immediately after the Revolution, but the idea was dropped and it is now used by the Provisional Military Administrative Council. "Jubilee Palace", today known as the National Palace, is used by the present Ethiopian Socialist Government for representative purposes. Both of these palaces are highly interesting historic monuments and contain valuable treasures representative of recent Ethiopian history under the late Emperor Haile Selassie, but neither is at present open to the general public.

136. The conversion of one of these time-honoured palaces into a National Museum would have many advantages. The buildings themselves are an important historic legacy which should rightly belong to the people, thus ensuring that they remain meaningful for future generations; the surrounding park would also be a very popular amenity area in the heart of the city.

Recommendations for museum development

137. The Museum Division of CRCCH will have to make many important decisions for the future development of museums, which may require appropriate managerial changes. In discharging such responsibilities the Division should have the benefit of advice from a distinguished Advisory Committee which can meet regularly to review and decide on plans for museum development.

138. The members would be the curators of central and regional museums and representatives from the History Faculty of the Addis Ababa University, the Ethiopian Orthodox Church and the French Archaeological Mission, together with individuals who are members in their own capacity.

139. It may prove useful to appoint from among the Committee's members, ad hoc groups to carry out particular tasks. Apart from the regular budget of museums, a special fund might be set up to finance specific activities, such as assistance to local efforts for the establishment of museums, preparation of publications, guidebooks and such other action as may promote museum development.

140. Previous short-term Unesco consultants have made recommendations on various aspects of museum development. Since the Museums Division has a crucial role to play in CRCCH, it is recommended that international assistance be sought for an expert on museums to serve for a period of two years. The expert would be responsible for organizing a training programme for museum staff, jointly with the Director of Museum and the Curator of the Museum attached to the Institute of Ethiopian Studies, and would be expected to advise on museum development and to help in setting up central and regional museums.

The Ethiopian Film Centre

141. The Film Centre attached to the Ministry of Culture has film studios located outside Addis Ababa in one of the former imperial experimental farm buildings. After its restructuring envisaged for the near future, the Centre is expected to become an independent Agency with full responsibility for the production, import, and distribution of films on a commercial basis. The production of new films, however, will still be funded by the Ministry.

142. During the consultant's mission the Film Centre was engaged in the production of a motion picture film on Lalibela's monolithic churches with a screen time of 30 minutes. The total shooting time is about 1-1/2 hours. After additional editing of the raw film, with more emphasis on the geographical setting of the monuments and ordinary village life, the film could easily run for 45 minutes to one hour.

143. The Centre is also working on an ethnographic documentary film with the provisional title "Hamar herdsmen and their music"; it is being co-produced with a Foundation from the Federal Republic of Germany.

144. There is no doubt that invitations for co-production of motion pictures and television films on various aspects of Ethiopia's cultural heritage would be warmly welcomed by foreign film and television companies. The production costs could most likely be covered by private capital, in which case marketing and distribution abroad would be greatly facilitated. Government investments could then be channelled into the development of indigenous film production capability.

Promotional activities

145. A specific job for the Translation and Publication Section would be the publication of annual reports, guide books, brochures and posters. Such specialized printing services would need to be sub-contracted to appropriate commercial printers or to the government printing office, budgetary provision for which needs to be made.

146. It would in particular be a great advantage to have good guide books covering various aspects of Ethiopia's cultural heritage. The trouble with

guide books generally is that they are expensive and designed as souvenirs, not as instant information givers. What is needed is inexpensive booklets or leaflets which give plans, pictures and a minimum of written information calculated to stimulate the reader's interest and curiosity. Such leaflets, written in various national and foreign languages, would be a useful tool for building up an understanding of Ethiopia's cultural values¹, but very little information of this type is now available in bookshops and tourist offices.

147. The Ethiopian National Tourist Organization (NTO) is engaged in such activities, but they are directed towards foreign tourists only. The information material in Amharic is not designed to appeal to the broad masses of the people; likewise, very little material on Ethiopia's cultural heritage is available for schools.

148. Arrangements for publications would be an obvious task for the Ministry of Culture alone, or in co-operation with the Tourism Commission, the Ministry of Education, local communities and other parties to which the CRCCH could render assistance.

149. The Tourism Commission has issued a good selection of tourist posters on the general theme "13 months of sunshine". Several of them illustrate various aspects of the cultural and natural heritage, but even more attention could be paid to high-quality presentation of historical buildings and artefacts representative of Ethiopia's cultural identity.

Development of cultural tourism

150. A sound economic base is necessary if measures to preserve the cultural heritage are to be expanded. One of the potential revenue-generating sectors now actively supported by the Government is tourism, considered to be a new "growth industry" in Ethiopia and estimated to reach the pre-1974 levels of about 74,000 annual arrivals by 1988². Table 3 gives monthly passenger arrivals and revenue from tourism for the year 1983.

TABLE 3: Monthly arrivals of tourists in Ethiopia and revenues from tourism in 1983:

Month	Arrivals	Revenue in Birr
January	4545	2,129,558
February	4347 x	528,581
March	4406 x	2,242,931
April	4790 x	1,670,565
May	5319	1,832,884
June	7866	1,115,058
July	7381	1,269,415
August	6117	1,533,159
September	5423	815,733
October	6379	1,641,959
November	4221	914,914
December	3446	1,383,611
Total	64240	17,078,368
(x) estimate		

Source: Ethiopian Tourism Commission, tourism statistics, March 1984.

1 Some good examples, published by the Ethiopian Tourism Commission may be mentioned: (i) Ethiopian Costumes (1980), (ii) Ethiopians and the Houses they live in (1981), and (iii) Ethiopian Festivals (1982), all of them by Jill Last.

2 Information provided by Fisseka Gedda, Commissioner of Hotels and Tourism, in 'Selamta' 1984, pp 23-26.

151. Ethiopia has much to offer tourists in the way of natural, man-made and cultural attractions. Domestic tourism is considered a worthwhile objective in itself since it is important that Ethiopians should get to know their own country better; and overseas tourists are welcomed not only as potential foreign exchange earners, but also as a means of promoting Ethiopian interests abroad.

152. It would be in the special interests of the Ministry of Culture to play an active part in the development of what may be termed "cultural tourism" in order to ensure the maintenance and up-keep of buildings of historic and architectural merit and to upgrade existing buildings and give traditional crafts a new lease of life.

153. One possible forum of influence is the Tourism Council, the chairman of which is the Commissioner of Hotels and Tourism, while the members are representatives from the various Ministries concerned: Ministry of Transport, Ministry of Information and National Guidance, Ministry of Construction, Ministry of Agriculture (wildlife), and Ministry of Culture.

154. The former Government prior to 1974 planned and constructed rather ambitious hotels at some of the most important historic sites; of these the hotels at Bahar Dar and Gondar are now in use, the Lalibela hotel is still unfurnished, and the new Aksum hotel has been occupied by the Military. These hotels were planned for well-to-do overseas tourists, and they are now felt to be out of keeping with the historic environment. Less pretentious hotels based on an indigenous Ethiopian design would be far less costly to build and maintain and would prove to be more appealing and interesting to tourists without creating an enormous gap between local living conditions and foreign tourist reserves.

155. A low-key approach along the lines of "adventure tours" would appeal to many tourists. Simple, traditional-style accommodation would be offered at village level. Such a programme would not be costly in terms of expenditure but would require considerable work with village residents, who should run the whole operation, and also the development of specialized marketing arrangements. The village discovery programme of Senegal could serve as a model for such a programme.

156. Table 4 shows the present hotel capacity in towns of major historic interest of special relevance to this study. Plans for the next few years envisage hotel development in areas of the country which are of scenic interest:

1985/86:	new hotel in Harar (100 rooms)
1986/88:	new hotel in Addis Ababa (500 rooms)
1986/88:	new hotels in Arba Minch, Amash and Skala (total 375 rooms)
1988/93:	new hotels in Asab, Goba, Jimma, Amo, Mekele, Massawa and Dejen (total 1050 rooms).

1 A description of the programme is contained in "Tourism, Passport to Development?". Emanuel de Kadt (ed.), a joint World Bank-Unesco Study, Oxford University Press, 1979.

TABLE 4. Present Hotel Capacity in towns of major historic interest:

	rooms	beds
1. Aksum hotel	17	20
2. Lalibela, "Seven Olives Hotel" extension	64 36	128 72
3. Bahar Dar Hotel Tana Hotel (new)	30 64	60 128
4. Gondar, Goha Hotel (new) Fegerra Kora Terrara	66 12 16 35	128 24 32 56
5. Harar, Ras Hotel Dire Dawa, Ras hotel Dire Dawa, Karemara	43 49 42	85 79 50
Total	474	862

157. The Ethiopian Tourist Commission is responsible for running the Handicrafts Centre which produces furniture, utensils and traditional handicrafts for the domestic and export markets. Its success clearly indicates that there is scope for up-grading the articles produced for tourists, increasing visitor spending levels, and generating jobs and income for local residents by encouraging the production and sale of indigenous crafts. To exploit these opportunities, training and technical assistance will be needed. Help may also be needed in order to organize co-operatives for buying and marketing goods and to develop a system of price and quality control. Items made in the workshops could be put on sale in an adjacent retail showroom, and/or marketed through shops and major hotels. Once the artisans have acquired journeyman status, they could be encouraged to open their own businesses. Further incentives might be provided in the form of workshop space and relaxation of import restrictions on craft-related supplies.

PART III

AKSUMITE CIVILIZATION¹

"...we have erected statues, one of gold, the second of silver, and three others in bronze for his glory..."

(Aksumite trilingual inscription in the Sabaeen, Greek and Ge'ez languages, 4th cent. A.D.)

158. The most significant traces of early Ethiopian civilization are found in the Tigrāi Region along the former trade caravan route leading from the city of Adulis on the Red Sea Coast to Kohaito, Matara, Etch-Maré, Yeha and Aksum.

159. Aksumite civilization rose to power in this area around the first century A.D. and, according to the third-century Persian traveller Mani, came to rank among the four greatest empires of its time along with Babylon, Rome and Egypt. At its peak, between the fourth and seventh centuries, its sovereignty extended westwards to Meroe in the Nile Valley and eastwards far into Southern Arabia; its sphere of influence to the south in Africa has not been determined with any accuracy, but it was probably substantial.

160. The ancient city of Aksum became the seat of the kingdom, which maintained trade relations with the Egyptian and Graeco-Roman world, as well as with India. But external sources provide little information about the kingdom, most of our knowledge deriving from archaeological research in the course of this century, especially in Aksum itself, which has yielded most striking testimony of unique and independent cultural achievements.

161. From numismatic research it has been possible to establish a list of names including 24 kings who struck coins from the third to the eighth century A.D.

162. Ezana, the best known of the Aksumite kings, ruled in the middle of the fourth century. From his reign date commemorative stones with trilingual inscriptions in Greek, Sabaeen and Ge'ez, which testify that he extended Aksum's territory in all directions. According to most sources he made Ge'ez the official language of the kingdom with its own script, which refined the Sabaeen system of Arabic.

163. These epigraphic stones certainly rank among the great memorials of antiquity. The inscription on one of them, now standing in a small park bordering the access road into the town branching off from the Asmara-Gondar highway, records the transition from paganism to Christianity as a state religion, which from that time onwards greatly influenced the course of Ethiopian history.

1 Aksum is also spelt Axum

2 also spelt Tigre or Tigré

3 F. Anfray: Les rois d'Axoum d'après la numismatique. Journal of Ethiopian Studies, Vol. VI, No. 2.

164. With the rise of Islam in the seventh century the Aksumite kingdom started to decline and, according to legend, many monuments were destroyed during an invasion from Southern Arabia under the Semitic Queen Judith in the tenth century.

165. The most impressive pre-Christian monuments which have survived destruction are a number of monolithic obelisks or stélæ. They were erected as mortuary structures at the necropolis of the nobles and are exquisitely carved to represent multi-storey buildings complete with door and windows, which are constructed in a manner peculiar to Ethiopia.

166. The biggest of them, now shattered after its fall, measured 33 metres above ground and weighed some 740 tons, which makes it the largest monolithic structure ever manipulated and erected in the ancient world, exceeding in size the obelisks of Egypt.

167. With the exception of the stelae, little has remained above the ground to this day. A great number of mortuary structures and ruins of palace buildings and mansions have been excavated in this century; but what is already known of the archaeology of Aksum's ancient civilization is nothing in comparison with what still lies underground.

168. Aksum's world importance as a historical and archaeological site was acknowledged by its inclusion on the World Heritage List on 5 September 1980. The pre-Aksumite sites of Adulis and Matara were not included on the list since they are less important urban centres than Aksum. Nor have these sites been dealt with in the present report, due to present difficulties of access.

Aksumite archaeology - general survey of previous activities

169. The most comprehensive research on Aksum civilization was carried out by the 1906 German Aksum expedition under Enno Littmann, T. von Lüpke and D. Krencker, who located and mapped many of the principal Aksumite and pre-Aksumite sites distributed along the Tigris plateau. Their subsequent voluminous publication still remains the basic foundation for all future archaeological research on Aksumite culture.

170. The excavations undertaken by the German expedition at the site of Aksum itself generated an enormous amount of information about the major sites: the Stelæ Fields, the Groups of Thrones, the tombs of Kaleb and Gabra Maskal, together with the palace ruins of Enda Mikael, Enda Semon and Taakha-Maryam.

171. An Italian archaeologist, G. Puglisi, made a first attempt to explore the stratigraphy of the site deposits at Aksum in 1939 immediately before World War II, which prevented further work. He was able to distinguish from five to seven cultural phases in various trial diggings.

172. Excavation work at the Aksum site was taken up again in 1954 and continued during the following years by the Archaeological Section of the Ethiopian National Library, subsequently renamed the Ethiopian Archaeological Institute. The Institute was established in 1952 with the professional

support of a French archaeological mission provided by the Centre National de la Recherche Scientifique (C.N.R.S.) which sponsored excavations at many of the key sites under the successive direction of mainly J. Leclant, Jean Doresse, H. de Contenson and Francis Anfray.

173. Its work included excavation of (i) subterranean tombs to the south of Mai Qoho in the vicinity of the "Tomb of Bazin", (ii) the old Maryam-Tsion church, and (iii) the eastern part of the Main Stelae Field with exposure of the entrance to the Tomb of Brick Arches, (iv) a part of Nefas Mawcha south and west of the Giant Fallen Stele, and (v) the Tomb of Kaleb and Gebra Maskal about three kilometers to the east of Aksum. This work continued under the sponsorship of the Ethiopian Archaeological Institute with focus on the Main Stelae Field during various campaigns from 1955 to 1958.

174. A three-season mission was undertaken by the Institute again in 1966 under the direction of Francis Anfray. This series of excavations revealed the "Dongur Palace" ruins one kilometer to the west of Aksum on the slope of Beta Giorgis, while stratigraphic test trenches of sites in the vicinity were also completed.

175. The most recent excavation programme at Aksum was initiated in 1973 by Neville Chittick, Director of the British East African Archaeological Institute, based in Nairobi. In the course of two years of digging (i) a series of "Catacombs" were found beneath a considerable area to the north of the "Standing Stele"; (ii) the "Tomb of the Brick Arches" was fully uncovered in the eastern area, and (iii) the "Tomb of the False Door" was cleared in the western area, "Addi Serai", of the "Main Stelae Field"; (iv) immediately west of the "Giant Fallen Stele" a complex of "Mausoleums", was uncovered and (v) soundings were carried out at such other sites as the "Gudit Stelae Field" south of "Dongur Palace Ruins" and at the "Tombs of Kaleb and Gebre Maskal".

Comments on future archaeological work

176. Since the 1974 revolution, all archaeological excavations have been suspended for various reasons, and further work awaits new legislation now being drafted to cover the preservation of the cultural heritage. The Aksum sites pose many archaeological riddles awaiting further research, which could profitably continue previous programmes, including particularly the excavation of tombs already discovered and the elucidation of chronological problems, which may require modern scientific radiocarbon dating of major sites for the evaluation and refinement of any chronological scheme based on field observations. Foreign university institutions would undoubtedly be willing to take part in archaeological research in Ethiopia if invited to do so, naturally on condition that all national treasures discovered would remain in Ethiopia. In practice they may be permitted to take back to their own museums and collections a large part of what they find, providing that the specimens they are allowed to keep are not unique.

177. Archaeological research is traditionally carried out on a multi-national basis. Contacts with foreign institutions, if properly planned, could be valuable for the training of Ethiopian archaeologists and the development of museums generally, including all the various disciplines involved in the presentation of the cultural heritage.

¹ also known as St. Mary of Zion (or Sion)

178. A long-term programme could be mounted to provide for the training of Ethiopian archaeologists abroad, and the subsequent participation, in Ethiopia, of teaching staff and students from the institution concerned in the work of scientific documentation, treatment of the finds and their final presentation in the museum.

179. The consultant does not recommend, however, that actual diggings should have any high priority compared to more urgent work for preserving the cultural heritage. The archaeological remains are well preserved underground and will stay so for an indefinite period, thus leaving ample time for the preparation of long-term plans for future diggings as ways and means may become available.

180. These considerations form the basis of the following recommendations and modest proposal for work on a number of selected sites, their aim being:
(i) preservation of the existing structures; (ii) better presentation of the sites to make them more readily understandable to non-professionals,
(iii) protection of sites against future urban development, and (iv) development of a regional archaeological museum.

RECOMMENDATIONS

181. Preventive maintenance of archaeological sites is the most important measure for future preservation, and should be organized regularly on the basis of annual site inspections. A regular budget should be set aside for this work, which may be carried out by specially trained workers under the supervision of a trained architect-restorer or an archaeologist, who should prepare a methodical and thorough report on the work done. This duty has been badly neglected in the past; in the absence of records on previous interventions, it is often difficult to ascertain the extent of the original structure compared to later additions and repairs.

182. The most common reason for the deterioration of ruins is the presence of water, either in the form of rising damp or rain-water from above, both of which penetrate into the structure and disintegrate the masonry. For this reason, the first priority is capping of the walls and the channelling away of rain-water (e.g. through gutters or soak-away pits).

183. The mortar used for top capping and pointing should be fairly resistant to water, but its strength and thermal expansion should not exceed those of the ancient wall structure itself so as not to create undue stresses. One recommendable material may be a hydraulic lime mortar with a considerable quantity of clayey matter and pozzolanic additive to increase water resistance. Only a minor proportion of Portland cement shall be added to increase the setting time. However, it is beyond the scope of this report to provide technical details of repair work.

184. A radical measure recently adopted to preserve the Tombs of Kaleb and Gebra Maskal has been to roof them over with corrugated iron sheets, which will certainly alleviate further disintegration of the wall structures and keep rain-water out of the burial chambers. However, the net result of this measure is to impair the site's visual impact which is the main attraction for visitors.

185. A more suitable permanent solution would be a smaller well designed cover to protect vital parts of the ruins and to prevent rain-water from seeping into burial chambers, for instance. The less important surrounding ruins should be protected by proper top capping of walls and good water drainage away from the site. A good standard design may very well be applicable to several sites, if the construction allows for flexibility.

186. The most vulnerable parts of masonry walls may be protected after consolidation by application of a water repellent, as suggested by Bernard Fielden for surface treatment of mud brick walls.¹ An ethyl silicate 40 diluted by an equal part of 96% commercial ethanol can be applied by spraying with a hand-operated plastic pulverizer. After being thoroughly mixed, the solution is left to stand for a short time until it heats up due to the chemical reaction. Two litres per square metre are required to form a water-resistant layer of sufficient consistency. After some days the mud-brick course again becomes porous and a second treatment is beneficial. The treatment is only effective on vertical surfaces or steep slopes, as on horizontal surfaces the thin crust is insufficient to resist the erosive action of heavy rain.

The stelae fields

187. The monolithic stelae (or obelisks) were erected as funeral monuments in three distinct areas of Aksum. (i) The smallest group is located to the South of Mai Qoho in the vicinity of the Tomb of Bazin. (ii) the largest group is situated to the immediate north of the town along a riverbed, which for part of its length is called Maj Hejja. This group can be roughly divided into two sections, a northern group of monoliths in the area named Geza "Agmai", and the southern main group of stelae where the large carved ones are found. (iii) The third necropolis is located to the west of the town south of Dongur Palace ruins, and known as the Gudit Stelae Field.

188. Very little information has been brought to light about the original setting of the stelae. The series of 24 aquatints executed by Henry Salt in 1807 give a rather idealized impression of Aksum's rural setting in the early nineteenth century.

189. When the German archaeological expedition surveyed the site and started excavations, most of the stelae lay buried underground. The German 1906 inventory listed a total of 78 stelae varying in size and artistic merit. Many more have since been brought to light, bringing the present total to more than 300, including 122 in the northern necropolis and around 100 in the Gudit area. Neville Chittick's diggings in 1974 alone uncovered three more buried monoliths, although only a small area was excavated. In all probability then, many more still await discovery.

190. Only six of the stelae found have carvings of multi-storey buildings; all of these belong to the northern group. One is still standing erect and in 1937, during the Italian occupation, another was brought to Rome where it was assembled and re-erected on the Piazza di Porta Capene.

¹ Bernard M. Fielden: Conservation of Historic buildings. Butterworth Scientific, London, 1982

RECOMMENDATIONS

191. Domestic dwellings have been built over a large part of the sites, and archaeological excavations have revealed that the sites have been disturbed by soil erosion, grave robbers and successive unrecorded archaeological diggings of past centuries.

192. Ambitious past recommendations, especially those of Sandro Angelini, have suggested anastylosis and re-erection of fallen stelae to revive again Aksum's former grandeur.

193. Since economic resources are so limited and the precise location of the monuments uncertain, the present consultant does not recommend such radical measures. The site began as a necropolis, and let it now stay as an archaeological site with the fragments of stela shafts, base plates and thrones covering the area, where visitors can walk between them, look at them, and admire the fine details and craftsmanship and start wondering about what sort of life was once lived here by the people who erected such monumental memorials.

194. However, the sites need careful and sensitive landscaping, along with continued archaeological excavations. In addition, remedial work is urgently required for some of the endangered monuments. The following sections set out proposals for a work plan.

(a) Landscaping

195. The site, located to the north of the present-day town, was rather unfortunately laid out as a public park or garden some twenty years ago. The only carved stele still standing was taken as its central feature and an axial arrangement was emphasized by a flight of steps, a round-about, and a fish pond in front of the Stelae Park.

196. The arbitrary demarcation of the park is indicated by the 1974 excavation of the "Tomb of the False Door" in the area known as "Addi Tserai", which is located partly outside the western enclosure wall. The southern wall was built recently, presumably to replace an original Aksumite wall discovered by Jean Doresse during excavations in the 1950s.

197. In order to transform the park into an archaeological site, it will be necessary to extend the area by demolition of some neighbouring houses and to restore its link with the northern area, thus constituting one continuous site along the Mai Hejja river bed.

198. It is recommended that in landscaping the site, the asphalt road, the roundabout, and the fish pond in front of the park should be eliminated so as to create a pedestrian precinct, which would restore the lost harmony of the area. This would also keep heavy traffic away from the standing stele, the stability of which is now in danger. If trees were planted in the area facing the Maryam-Tsion Cathedral, they would conceal this much later structure from the archaeological site and provide a pleasant recreation area in the heart of the town.

(b) Rescue operations

199. One exquisitely carved stele lies broken into three pieces, together with the base plates, in the middle of the Mai Hejja river bed in the northern part of the site. These pieces in particular, but others as well, need to be removed and placed in a safer position.

200. The fragments may weigh as much as 20 to 30 tons, making far too heavy a load for any helicopter to remove. One possibility that may be investigated is the use of old techniques for hauling heavy loads on a timber fork sledge. This labour-intensive method is well documented from ancient times, when huge monolithic stones were moved from one place to another. We have no records of the methods used in the Aksumite period, when the giant stele of about 740 tons was moved from the quarry to its place of erection - probably a distance of about 12 kilometers - without the use of any machinery.

201. The following present-day examples of somewhat similar operations support the theory that such an undertaking may be feasible. At the Pre-Historic Research Centre in Lejre, Denmark, 80 people recently hauled a seven-ton granite monolith used for the construction of a dolmen. It is estimated that each person may have a tractive force of 25 to 30 kilos and that the total tractive force required to haul a stone on level ground would amount to half the actual gross weight of the object. For example: a 20-ton monolith may require a work-force of about 300 to 400 people.

202. The technique of organizing task forces for similar jobs is still in use in South Arabia for bringing dhows safely to shore, and Buddha statues of 30 to 40 tons, even up to 300 tons, are still hauled by joint human efforts in India.¹

(c) The stability of the erect stele

203. Only one of the sculptured stelae still stands erect, towering 21 metres above ground level with a carved relief imitating a ten-storey building, complete with doors and windows. Its total weight would amount to approximately 160 tons.

204. The stability of the stele has recently been doubted, and possible movements were measured by use of a theodolite during two successive surveys in 1983. Movement of 6 mm in a west-east direction and of 3 mm in a south-north direction was measured at the summit, but one reading only was taken on each occasion, and it should be considered to have an accuracy of ± 3 mm.

205. A possible increase of inclination is likely to have been caused by vibrations from heavy military trucks passing close to the site in recent years. This traffic has now been prohibited, but there will be a constant risk of vibration as long as there is an asphalt road near the site.

¹ General references: Richard Atkinson, "Neolithic engineering", in *Antiquity*, 1961. John Coles: *Archaeology by experiment*, New York, 1973.

206. A preliminary report suggesting an eventual "straightening" of the stele was commissioned by the French Ministry of Foreign Affairs in 1980 at the request of the Ministry of Culture. The consultant J. Becker, who is a soil engineer by profession, recommended further investigations by a number of French agencies with competence in the field.

207. In the opinion of the present consultant, the inclination, which is evident from early photographs, does not in itself justify a "straightening", and until further survey measurements on the inclination are made available there should be no reason to speculate on the actions to be taken for possible consolidation.

208. Should further movements be detected in subsequent readings, there would be every reason for alarm, and urgent measures for consolidation should be initiated with the assistance of a recognized geo-technical firm. A structural analysis based on existing information is given in Annex XIII.

Dongur Palace ruins, Addi-Kilté

209. The site of Dongur, located one kilometer east of Aksum, was excavated in 1966 by the Institute of Archaeology under the direction of Francis Anfray from the French Archaeological Mission.

210. The structure now revealed covers a total area of approximately 3000 square metres, probably dating from the late Aksumite period. The plan shows the characteristic wall structure of Aksumite architecture with alternating recessed and projecting parts also reproduced in the architectural decoration of the carved stele. The structure was originally built as a residential mansion or palace.

211. Most unfortunately, the ruins have been radically repaired and parts of walls have been reconstructed after demolition of original Aksumite masonry without any documentation on the extent of the work, thus leaving a rather lifeless and incorrect reproduction of original masonry.

RECOMMENDATIONS

212. It is not possible to restore the lost originality of parts of the monument. Naturally, future interventions and repairs should respect the basic principles of restoration of historic structures and the work done should be fully documented.

213. It is suggested that the following activities be carried out in connexion with the ruins: (i) construction of a permanent shelter on top of the brick oven which is likely to be damaged by rain-water, (ii) consolidation of walls, repair and completion of top cappings for all walls, (iii) improvement of rain-water drainage, (iv) provision of information material for visitors, and (v) clearance of adjacent site to the north of the ruins.

1 Work published by Francis Anfray in: "Archeologia", No. 19, Nov/Dec 1967, Paris, and in: "Paideuma", XVIII, 1973, Frankfurt.

The Gudit Stelae Field

214. The large area to the south of Dongur Palace ruins is a field of scattered stelae associated with the name Gudit. According to tradition, this was the name of the queen who destroyed Aksum in the tenth century.

215. More than one hundred roughly carved monoliths are now recorded in the area, against the 44 listed by the German Aksum expedition. The prospects for future archaeological excavations thus appear promising.

RECOMMENDATION

216. It is recommended that the area be protected as an archaeological site after payment of compensation to the farmers, and that the extent of the field be demarcated. Re-erection of a number of stelae may not impose any special problems, as simple techniques can be used.

The Palace of King Kaleb and Gabra Maskal

217. This site, traditionally referred to as the palace of King Kaleb and his son Gabra Maskal, is located about two kilometers to the north east of the town up the valley of the river Maj Hejja. This site at the divide above the town affords a strikingly beautiful view of the landscape and the distant mountains beyond, thus making a visit a most memorable experience.

218. The subterranean tombs were partly excavated by the German archaeological expedition in 1906, but considerable excavation work has since been carried out in the area without leaving any documentation.

219. The complex consists of two tomb structures, one with three and the other with five burial chambers constructed in cyclopean masonry of dressed granite blocks of considerable size. The exposed superstructure has been reconstructed in recent years without records on the scale of interventions.

220. The palace ruins measure approximately 33x40 metres, but Neville Chittick, who made further soundings in 1973-74, feels sure that there are extensive and substantial buildings on the eastern and perhaps southern side of the structure.

221. As a measure of protection, the site was recently roofed over with corrugated iron sheets and surrounded by a rather obtrusive wall, which partly destroys the view of the surrounding landscape from the ruin itself.

RECOMMENDATIONS

222. The site is important and worth preserving mainly for two reasons: (i) as a vestige of Aksumite architecture dating back to the sixth century, and (ii) as a rewarding place to visit, both for its historic interest or its attractive setting.

223. The historic integrity of the structure should be respected in all preventive maintenance work and the environment should be protected as a conservation zone. Further archaeological excavations may lead to a better understanding of the ruins.

224. The preventive maintenance may involve, in particular (i) a detailed survey of the structure and preparation of measured drawings, resulting possibly in demolition of later additions; (ii) consolidation of wall structures; removal of the temporary roof, and the construction of a permanent shelter above the entrances to the burial chambers. A study should be made to determine whether the shelter should cover the whole of the subterranean tombs, or a water-repellent stratum, combined with improved drainage, would be sufficient; (iv) static survey of the cover stones of the grave chambers and consequent consolidation if required.

225. The aesthetic appeal of the historical site has been greatly reduced by the construction of the enclosure wall, which is too high and obtrusive. When archaeological work is continued, it would be well to examine whether a lower wall would still give sufficient protection to the site, or even whether any wall is really necessary.

Area conservation and legal protection of the environment

226. A master plan for the town of Aksum was prepared by an Italian consultancy firm before the 1974 revolution, and the report is available for consultation in the Ministry of Housing and Urban Development. The plan has not been updated, but it is claimed that any future development will respect the historic environment and be carried out only after consultation with the Ministry of Culture.

227. The French archaeological team associated with the Centre for Research and Conservation of Cultural Heritage has recently updated the information available and prepared a map which identifies the major areas of interest and shows the town area which should rightly be designated as a preservation zone. Adoption of this proposed plan would imply that future town development be concentrated to the south of the Asmara-Gondar highway.

RECOMMENDATION

228. As far as could be ascertained by the consultant, no land-use regulations exist to govern town development, and it is recommended that a plan be drawn up so as to allow areas of land to be developed without destroying the historic townscape. Inter-ministerial co-operation would be needed for such planning.

Development of museums in Aksum: aims and objectives

229. Aksum now has two museum collections which should serve as a point of departure for new museum development.

The Treasure of Maryam-Tsion

230. This rich collection, which is housed in an annex to the church of Maryam-Tsion, contains a great number of priceless relics of the royal dynasties. These include the crowns and other regalia of a succession of Ethiopian monarchs, much rich embroidery and valuable Ethiopian manuscripts on parchment, some dating back to the fourth century A.D. According to legend, the original Ark of the Covenant, brought from Jerusalem by Menelik I, the son of King Solomon and the Queen of Sheba, is placed in safekeeping in the treasure of this church.

231. The collection also includes many priceless commemorative stones from the finest period of Aksumite civilization; three of them are:

- (i) Stone dating from the fourth century A.D. with a Greek inscription of the Emperor Ezana, describing his victory over Noba, a kingdom probably located in present-day Sudan.
- (ii) Stone dating from the sixth century A.D. with Sabaeen characters describing the victory of King Kaleb over the people of Aguezat, probably in present-day Sudan.
- (iii) Stone with Sabaeen characters describing the victory of Gebu Kristos, son of King Kaleb over South Arabia in the sixth century A.D.

232. Several similar votive stones are casually stored away in odd corners of a building nearby, and testify to the rich collection of historical material which can be used for future museum development.

233. The museum collection, which is not open to the general public, is in the safe keeping of the Ethiopian Orthodox Church, and it is recommended that any changes of arrangement be made in close co-operation with the ecclesiastic authorities.

The archaeological museum

234. The archaeological museum is housed in a modern building, completed in 1973, with a floor space of approximately 150 square metres. The whole site, located next to the new Maryam-Tsion church in the very centre of Aksum, has a total area of 2000 square metres..

The museum displays artefacts (mainly pottery, faience, glassware, coins, and bronze figurines) from archaeological diggings in Aksum, most of them originating from the 1973-74 excavations by Neville Chittick.

235. The exhibits all still bear the registration numbers from the dig, but little effort has been made to arrange the display to serve an educational purpose and still less to appeal to the imagination. The showcases are covered with accumulated dust.

236. Custody of the museum is entrusted to the Branch Office of the Ministry of Culture, with a total annual budget of 5,000 Eth. Birr. The overall responsibility rests with the Director of National Museums.

Proposal for improvement of museum premises

237. In his 1974 report on the preservation and restoration of sites and monuments along the Historic Route, G. S. Burrows suggests that the former Governor's house could be made available for use as a museum and office. It was not possible to investigate whether this proposal is viable today, or if any other existing structure would suit the purpose after restoration.

238. The need for improved museum premises and a reorganization of the existing collection is obvious. Unless another existing building can be identified for the purpose, the best solution would appear to be extension of the present museum building, in view of its central location.

239. Firstly, it should be designed as an attractive (though burglar-proof) display of artefacts collected from the various archaeological sites. Secondly, it should place these finds in their broader context by presenting a vivid outline of Aksumite culture and history. This would involve illustrating other pre-Aksumite and Aksumite sites in the Tigray region, as also the influence which Aksumite building traditions exerted on later developments and innovations in Ethiopian architecture.

240. The display may illustrate how Aksumite building construction and design are reflected in the famous monastery of Debra Damo; how they influenced the design of the church of Imrahanna Kristos in the Lasta district; how they were incorporated as purely decorative features in the Lalibela rock-hewn churches; and how they live on in very recent church buildings.

241. This educational approach, with its emphasis on the special characteristics of Aksumite architecture, would bring home to visitors - Ethiopian nationals and foreign tourists alike - how consistent the long development of architectural form and function has been in Ethiopia.

242. It is further recommended that insignia of royalty and other museum treasures from Maryam-Tsion be placed on display on a loan basis to illustrate the continuous succession of Ethiopian kingdoms, dating back to the time of the Aksumite Empire.

243. If the display is extended to cover developments in Ethiopia right up to the present day, it would be possible to arrange temporary exhibitions illustrating other aspects of Ethiopia today. The museum with its contemporary appeal could thus assist in the development of the country.

244. For the development of such a museum, it will be necessary to prepare detailed instructions for the architect who will design the building. The above comments are merely intended as preliminary suggestions.

1 See item 5 of Annex III

245. The extended museum could possibly have a floor area of about 1000 square metres, roughly apportioned as follows:

- display of commemorative stones	50 m ²
- numismatic collection	25 m ²
- archaeological finds	150 m ²
- comparative exhibition on Aksumite architecture	50 m ²
- insignia of royalty on loan from Maryam-Tsion	75 m ²
- topical events/changing exhibition	100 m ²
- public toilets and service area	50 m ²
- offices for administrative staff, general service and storage area	500 m ²
- total floor area	1000 m ²

246. The museum compound covers approximately 2000 square metres, thus allowing ample space for the enlargement of the existing building within the present boundaries of the site. The extra area should be landscaped as an archaeological garden (Lapidarium), where large objects can be placed, especially sculptured stones of doubtful provenance, which are not normally kept in their original place and are too big to fit into the building.

PART IV

THE PROTO-HISTORIC SITE OF TIYA

247. The Tiya site was included on the World Heritage List on 5 September 1980. The Government's nomination form describes the site as follows:

"The region of Soddo, situated to the South of Addis Ababa, on the far side of the Awash River, contains a remarkable number of archaeological sites, the distinctive feature of which is hundreds of carved stelae.

(To date, some 160 sites have been identified.)

These carved monoliths, from 1 to 5 metres tall, are of several different types, and include stelae carved with composite patterns, anthropomorphic monuments, hemispherical or conical stones or simple obelisks. In the northern part of the region, the stelae are decorated with representations of swords in association with enigmatic symbols and summary human figures. The Tiya site, situated 38 kilometres south of the Awash River and one of the most important in the Soddo region, contains monuments of this type, with 36 monuments, including 32 carved stelae, one of which is broken but which originally measured 5 metres in height.

The stelae were roughly aligned over a distance of some 45 metres in NNW direction. Another separate group of three stelae is situated approximately 60 metres further to the NNW.

Decoration takes the form of swords and enigmatic symbols, while one stele has a human silhouette in low relief.

This site, like all those of the Soddo region, had a funerary function, and the stelae are surrounded by scattered graves.

The Soddo sites, of which Tiya is undoubtedly the most representative, provide evidence of an ancient Ethiopian culture which has not yet been accurately dated."

248. The spectacular beauty of the site would make it worth a visit, quite apart from its historic interest. It can be visited by tourists in a one day trip from Addis Ababa, and the route could include such other interesting places as the prehistoric site of Melka-Konture, the extinct volcano of Zukula, and the rock-hewn church of Adadi Maryam.

249. Melka-Konture is one of the prehistoric sites of the lower valley of the Awash, in which fossilized hominid and animal bones, the oldest of which date back 4 million years, were found in a remarkable state of preservation by an international team of palaeontologists and prehistorians working in the area between 1973 and 1976. The site of Melka-Konture itself is located on the river bank in an attractive grassland setting with scattered Acacias. The archaeological camp consists of a number of traditional buildings a small distance from the main site of the excavation; one of them houses a small site museum with finds from the diggings.

250. The monolithic church of Adadi Maryam is one of the few southern rock churches; another isolated, but now ruined rock church can be found near the present Yekka Mikael church in Addis Ababa. All other rock churches are located in the northern part of the country.

251. The structure has several serious cracks and water is presumably percolating into the rock surface during the rainy season, aggravating the precarious condition of several parts of the roof.

252. The church and the nearby village with a much frequented market are mentioned in early records by Portuguese monks who visited King Lalibela here.

253. The two sites mentioned above are not included in the work programme for the International Campaign, but they are considered important as part of a route that includes the stelae field at Tiya. It is recommended that the sites should receive more attention and regular maintenance, especially the Adadi Maryam church.

RECOMMENDATIONS

254. Although all the stelae have been moved around it may be recommended that some of them be re-erected to give a better impression of the site. The existing wire fencing should be replaced by a natural barrier of cactus.

255. The site is situated only some 500 metres from the village which would be a good location for a small country centre designed to provide better understanding of the place and the Soddo region in general with its wealth of megalithic remains. A new building may be unnecessary or even undesirable for the purpose. In any case, an unpretentious traditional building would best serve the purpose.

256. The display would consist mainly of documentary photographs accompanied by an explanatory bilingual text in Amharic and English and other pertinent information that would give visitors a better understanding of the area. It is well known that a museum, along with other attractions, can be a good magnet for tourists.

PART V

LALIBELA ROCK-HEWN CHURCHES AND TRADITIONAL HOUSING

"whoever comes in pilgrimage to your sanctuary will acquire the same merit as those who have made the pilgrimage to the Holy Sepulchre in Jerusalem".

(Ethiopian chronicle)

257. After the decline of the Aksum Empire centred in the Tigrai region power shifted in the twelfth and thirteenth centuries to Roha in the Lasta district, where the Zagwe dynasty ruled for little more than a century.

258. The most famous representative of the dynasty is King Lalibela (1190-1222) to whom is attributed the construction of eleven rock-hewn churches in the capital, Roha, later renamed Lalibela.

259. The thirteenth century witnessed the renaissance of Christian art and church building in Ethiopia.

260. When the Zagwe rulers were succeeded by the Solomonid dynasty in 1270, the building of churches continued but they were nearly all destroyed by Muslim invaders between 1525 and 1540, leaving only a few isolated churches and monasteries and Lalibela's indestructible monolithic church buildings, 120 of which have been listed in the Wollo region, many of them with exquisite interior wall paintings.

The monolithic church buildings and the village of Lalibela

261. The most remarkable examples of rock-hewn churches are to be found in Lalibela, where they form a truly magnificent complex.

262. Those to the north of the Jordan river bed include: Biet Medhane Alem (the church of the Saviour of the World); Biet Maryam (the church of St. Mary); Biet Maskal (the church of the Cross); Biet Denagel (the church of the Virgin); Biet Golgotha Mikael (the church of Golgotha Michael); Biet Selassie (the church of the Trinity).

263. Another group stands to the south of the river Jordan, namely: Biet Amanuel (the church of Emmanuel); Biet Keddus Mercorios (the church of St. Mercoreos); Biet Hawaryat (the grotto of St. Peter and St. Paul); Biet Abba Libanos (the church of Abbot Libanos); Biet Gabriel Rafael (the church of the Archangels Gabriel and Raphael).

264. One church, Biet Ghiorgis (the church of St. George), stands alone some distance to the south west.

265. Although the churches are traditionally associated with King Lalibela, it is unlikely that they were all constructed within the brief span of a few decades. The general view is that the complex developed from the twelfth century onwards as a place of pilgrimage and refuge from the Muslim invasions, which isolated the Christian communities in the mountainous plateau of Abyssinia, and that the work probably continued into the fourteenth century.

266. One theory is that Biet Merkoreos and the unfinished Biet Gabriel-Rafael were intended for secular purposes as they have no clear east-west orientation - a theory supported by archaeological finds when the trenches around Biet Merkoreos were cleared in 1966.

267. The buildings are all monoliths, carved out from a sloping plane of volcanic red scoria underlaid by a dark grey, igneous basalt. They are all interconnected by a maze of tunnels and passages with openings to hermit caves and catacombs.

268. The trenches surrounding the entire complex were dug out to provide drainage for the large area containing the churches and may also have served for defence purposes.

269. Sandro Angelini has estimated that, for the creation of this whole complex, five times as much rock was hewn away as for the construction of the two temples of Abu Simbel in Upper Egypt.

270. The full extent of the site is not yet known, however, since houses have been built over the outer trenches.

Architecture

271. The churches all have certain features in common, but at the same time they differ widely from each other. They are all of the basilican type, displaying such archaic features as narthex, nave with aisles and triple eastern sanctuary, as in early Christian churches. They were inevitably influenced by such countries as Syria and Egypt, with which Ethiopia was most closely in touch.

272. The churches are carved out in such a way as to imitate the traditional features of buildings, with pillars, spring courses, beams, barrel vaults, domes, etc.

273. The sophisticated workmanship reflects a great variety of foreign influences, combined with purely Ethiopian features of Aksumite structures. But in the Lalibela churches these features have lost their original structural purpose, and have become purely decorative. This point may best be illustrated by Biet Amanuel, which is dealt with in paragraph 328.

274. It is beyond the scope of this report to describe in detail the architectural and stylistic influences reflected in the Lalibela churches, but the above brief comments illustrate the importance of the rock-hewn churches in terms of art and architectural history.

1 For a scholarly discussion of the subject the reader is referred to D.R. Buxton: The rock hewn and other Mediaeval churches of Tigré Province, Archaeologia, No. 103, Oxford, 1971.

The village setting

275. Lalibela is situated in an alpine area of Ethiopia's central plateau at an altitude of between 2,500 and 2,800 metres above sea level, with spectacular views towards the Lasta range of mountains.

276. The morphology of the landscape has been largely shaped by the alternation of basalt with much softer, porous tufa which has contributed to the creation of a rugged landscape with deep canyons eroded by tortuous rivers.

277. Roha Lalibela is now the chief town of Lasta, a region in the province of Wollo, the capital of which is Dessie. It can be reached by a rough access road of more than 100 km., branching off at Weldia from the Addis-Ababa-Asmara highway; it was constructed within the last ten years with assistance from the World Food Programme. Access is also possible by air, the gravel airstrip being located some 20 kilometers to the south of the village.

278. The village is situated on the mountain slope in a wide valley open to the south and west, and dominated to the northeast by the mountain Abuna Joseph.

279. The tableland is semi-arid due to extensive deforestation and consequent rapid run-off of the scanty rainfall. The whole Lasta district is one of the areas most severely affected by drought in the last ten years, causing failure of pastures and crops and extremely critical conditions for both human beings and livestock.

280. The village has a population of some 4 to 6 thousand inhabitants, of whom 1,500 are said to be priests, traditionally dependent on an income from the church.

281. Religion is an important part of daily life in the village, and the majority of the churches are still places of active worship, especially at early morning services and during the Ethiopian Christmas and Easter periods.

Lalibela "vernacular"

282. The traditional or "vernacular" houses are called "tukuls" and closely resemble those found in Tigray: round two-storey structures with a solid outside staircase leading to the upper floor used for living, the livestock being stabled below.

283. The walls are built of irregular rubble bedded in clay mortar, and sometimes faced both inside and outside with "chika", made from clay mixed with straw. Lime is generally too expensive and not readily available in Lalibela, but slops of whitewash are occasionally applied around the apertures to reflect more light into the interior.

284. The horizontal floor division is accentuated by a string course of projecting flagstones designed to throw water away from the wall. This has proved to be an effective protection against the deteriorating effect of weather.

285. The roof is conical and traditionally thatched. This is generally the most critical part of the construction, as an otherwise good wall is very vulnerable to rain water. The thatch therefore has to be maintained regularly if the house is to last any length of time.

286. Slightly more than 200 traditional "tukuls" were listed in a 1970 survey; more than 50 seem to have disappeared since then, and many are in a bad state of repair.

Restoration work in the past - general survey

287. In the course of this century, a wide range of restoration measures and three major restoration campaigns have been carried out on the Lalibela churches.

The 1920 restoration campaign (undocumented)

288. The work is said to have involved: (i) repairs to the entrance to Biet Maryam and the floor of Biet Golgotha; (ii) erection of partition walls inside Biet Merkoreos (they were demolished later by Sandro Angelini); (iii) partial rebuilding in masonry and cement roofing of the south entrance porch of Biet Maryam; and (iv) lead filling of various cracks in Biet Maryam, Biet Amanuel, Biet Golgotha and Biet Denagel. The work was presumably interrupted before completion.

The 1954 campaign

289. There is no written record of the work carried out in 1954 by the Italian consultant firm of Bastiano, Rosetta and Cambusi, but their rather drastic "restoration" obviously caused much damage to the monuments.

290. Some work, such as the construction of stairways and partition walls, was intended for the convenience of the priests and affected the integrity of the churches. Here and there cornices and pillars were rebuilt with little consideration for their monolithic character, and generally executed with "little grace but with much cement".

291. Special damage was done to the exterior of Biet Medhane Alem and Biet Amanuel. In both cases the outer walls were coated with a bituminous layer and a later with an incongruous wash of red paint. The holes, which can now be seen at the Biet Amanuel, result from the removal of nails driven in to hold in place the wire mesh providing additional support to the bituminous layer. The monolithic pillars of the arcade surrounding Biet Medhane Alem were all replaced by masonry columns except for three in the south-east corner, and a heavy cement cover was poured on top of the exquisitely carved roof.

The 1966-68 restoration campaign

292. The International Fund for Monuments, formerly based in the United States of America, was actively engaged in restoration work in Lalibela during two periods of four months each, in 1966/67 and 1967/68¹.

293. Supervision of the work was entrusted to Sandro Angelini, who conducted a comprehensive, scientific restoration of most of the churches and started the clearance of the surrounding trenches and drainage channels.

294. Apart from regular maintenance work and some succeeding trench clearance, which was continued under the direction of CRCCH, the present appearance of the churches is mainly due to the repairs carried out under the direction of Sandro Angelini. Unfortunately, he was not able to complete the work on Biet Amanuel and most of the information on his work procedures disappeared. Only the original plans prepared, together with two precious volumes of photographic records, now preserved with the Project Section office in Addis Ababa, throw light on the character of the interventions. Considering the sad state of the monuments at that time, the work must be regarded as successful, and the approach adopted can serve as an example for future repairs.

295. The general procedure was to cut away damaged or destroyed parts, apply galvanized iron netting if necessary for reinforcement, and subsequently remodel with mortar the original form and colour. The cast was finally finished off with a hatchet or chisel to imitate the original texture of the rock and restore the monolithic character of the church.

296. It is difficult to ascertain the exact proportion of cement used but according to the list of supplies annexed to Angelini's Work Plan for Development of the Sites 1971 report², it was probably three parts of cement to one of lime. This is too high a proportion of cement, in view of its damaging effects when combined with more subtle materials.

297. A test analysis of a sample taken from the lower part of the outer walls of Biet Ghiorgis indicate a pro rata composition of 27 per cent lime and 50 per cent aggregate, the rest being soluble silicates and salts. There was no trace of any synthetic resins, but presumably an additive of ferric oxide pigment. It was impossible to ascertain whether this originates from the aggregate of crusted rock or was added deliberately to match the colour of the rock³.

298. Parts in imminent danger of collapse were consolidated by injections of cement (!) with high adhesive and expanding properties, and reinforcing steel rods were inserted whenever it was thought necessary.

299. The tar-based paint previously applied to the outer walls of Biet Medhane Alem and Biet Emanuel was removed, together with other incongruous additions such as the layers of cement poured on top of roofs for water protection.

1 International Fund for Monuments. Lalibela - Phase I, Adventures in Restoration, New York, 1967.

2 See item 4 of Annex III

3 The sample was most kindly analyzed by Mads Christensen, Chemist, the Conservator School, Royal Academy of Fine Arts, Copenhagen

300. Water-repellent solutions were applied to the roofs of four churches: Biet Maryam, Biet Medhane Alem, Biet Denagel, and Biet Mikael. The part of the facade of Biet Maskal facing south was likewise treated, together with exquisitely carved details such as the bas-relief on the west gable of Biet Maryam.

301. Although Lalibela is located in a seismic zone it does not appear that tremors have caused any major damage. The presence of fractures in the rock can be attributed essentially to stresses within the natural rock. After questioning the priests, it was concluded that cracks have not increased in number within the last 25 years. After cleaning, existing cracks were cleaned, sealed and finally filled with mortar.

302. During the 1966-68 restoration campaign a total of 200-400 workmen were employed to remove debris from the tunnels and trenches, which were partly cleared to provide access and adequate drainage for the site. However this work was not completed.

Unesco surveys and reports on Lalibela churches

303. The following preservation work on the Lalibela churches was carried out under the Unesco/UNDP-assisted Project ETH/74/014.

The 1978 symposium on Stone Preservation

304. This four-day meeting was organized in 1978 by the International Centre for Conservation and Restoration of Monuments (ICCROM). Its technical report deals mainly with (i) the geology of the area, (ii) structural and geophysical characteristics, (iii) reasons for structural deteriorations, and (iv) proposed precautionary measures and future work. A summary of the conclusions and resolutions adopted at the end of the symposium is provided in Annex VII.

Photogrammetric survey of Lalibela churches

305. The importance of the Lalibela churches to the world community was acknowledged by their inclusion on the World Heritage List on September 1978. Consequently the World Heritage Committee agreed to collaborate with the Ministry of Culture in the preparation of a photogrammetric survey of the monolithic church buildings, and to assist in training local personnel in this specialized field of operation, which may be the first stage in setting up an architectural and archaeological photogrammetric unit in Ethiopia.

306. The World Heritage Fund financed two international fellowships in terrestrial and architectural photogrammetry at the School of Photogrammetry, St. Gall, Switzerland. Photogrammetric equipment, a theodolite and related equipment were purchased under the programme, and a consultant was recruited from the Institut Géographique National, Saint-Mandé, France.

307. During the consultant's mission stereometric records were completed for three churches: Biet Libanos, Biet Maryam, and Biet Ghiorgis. The next stage is plotting of the survey, an operation which was to have been carried out by the Ethiopian Mapping Agency under a co-operative arrangement with the Ministry of Culture.

308. It is to be hoped that the plotting of the survey will soon be completed since any future large-scale intervention in Lalibela will require detailed survey drawings to a scale of 1:50 supplemented by smaller-scale detailed drawings. An alternative to a photogrammetric survey would be measured drawings prepared by hand on the spot. This traditional method of surveying a building has the advantage of giving the architect an intimate knowledge of the building, permitting observations on previous repairs and on the current state of the building in preparation for future restoration work. If this course is adopted, the work should start without delay.

309. The narrow trenches around the Lalibela churches make it difficult to take stereo pictures covering the whole elevation of the monuments, which may even make a traditional survey more advantageous. In any case, a photogrammetric survey reveals only the elevation of each monument, and a great deal of manual work is still involved in the meticulous preparation of plans and sections.

Preventive maintenance

310. Regular up-keep and cleaning of the site are now regular routine operations carried out by the Branch Office of the Ministry of Culture at an annual cost of 30,000 Eth. birr. The Office has eight permanent staff members, including guards and storekeeper, while some 30 people are hired on a daily basis for cleaning and maintenance of the sites. The three types of work involved in preventive maintenance are cleaning, consolidation and protection.

RECOMMENDATIONS

(a) Cleaning

311. All stone surfaces exposed to weathering processes are eroded over time, but deterioration will be restricted to the surface only if there are no cracks and fissures through which the water can penetrate into the rock. Provision for a rapid run-off of water greatly helps to avoid its percolation and minimizes the damaging processes of alternative wetting and drying.

312. Cleaning is a rather simple operation in Lalibela which has no air pollution, and mainly involves sweeping away accumulated dirt and rubbish, manual weeding, and removal of excessive growth of mosses and lichens by use of a hand brush.

(b) Consolidation

313. In addition to the measured drawings mentioned previously, other types of documentation will be needed, such as three-dimensional moulding and casting of priceless details, which in the long run may have to be remodelled or replaced by replicas. Some monolithic window details were replaced at Biet Maryam during past restoration campaigns, and the same course may be justified in a few cases in the future, in order to preserve important features before they completely disintegrate and are irretrievably lost.

314. For example, the bas relief of the two crusading knights fighting a dragon above the porch of the west wall of Biet Maryam is so important that a cast copy should be made, while the relief is still fairly intact. If found necessary at a later date, a cast copy may be set on top of the original to protect it against further weathering.

315. After a careful survey a long-term policy should be worked out for gradual consolidation of important architectural features, so as to preserve the historic authenticity of the monolithic structures. Skill and dedication will be required to carry it out.

316. It is important to continue the static survey initiated in 1968 by application of "tell-tales". In 1979, additional measures were taken at Biet Amanuel using a "tensometer" but it was not possible to ascertain whether any subsequent records are available.

317. By continuing the static condition survey and preparing measured drawings meticulously indicating all fissures and failures in the rock, it will be possible to analyze how the stresses have worked and the building has decayed in order to decide on the appropriate remedial measures.

318. In the continuing structural condition survey, special attention should be paid to Biet Abba Libanos and Biet Amanuel. If it is found that the cracks are still growing and the structure not stable, further examination by a structural engineer will be required. Insertion of tensile bolts in a neat lime-sand-cement grouting may be deemed necessary to act as tie bars. Great lumps of loose rock may have to be safely anchored in position by use of stainless steel cramps, well fastened into the main backing material and possibly supplemented by grouting with a lime putty including epoxy resins. Unfortunately the cost of using resins is prohibitively high; they are therefore recommended only in specific cases, where it is deemed strictly necessary.

319. It is important that the exposed surfaces should have no open cracks and holes through which water can penetrate and accelerate the deterioration processes. Larger gaps and cracks should be thoroughly cleaned and filled by applying a stucco which adheres well to the stone surface. A mixture of lime, finely sieved sand and crushed local scoria with a small amount of cement can be used.

320. When fissures and deep cracks occur, they should be grouted with a liquid putty of the same composition. The addition of pozzuolanic materials to the lime in grouts and mortars is important to ensure sufficient setting.¹

321. Holes and decayed parts may be re-built by use of a lime mortar with a coarser aggregate of crushed scoria, taking care to match the native rock in colour and texture. The surface should finally be worked over with masonry tools. Any mason knows how stone work should look when finished. If larger areas require reinforcement, a stainless steel wire grid should be used.

322. Full records of all operations should be kept and deposited with the archives of the building in question, and every work of consolidation should be followed up with a special programme of annual inspection.

¹ cf. Bernard M. Fielden: Conservation of Historic Buildings, Butterworth, London, 1982, p. 365.

(c) Surface protection

323. Salt crystallization on the rock surface is the main reason for its decay. As scoria has a high porosity, there is a danger of water being easily absorbed by the rock, and frequent wetting and drying-out cycles accelerate its deterioration.

324. Two main problems are involved in stabilizing and preserving native rock in situ: (i) selection of an impregnant that is compatible with the mineral constituents of the rock, and (ii) getting this material to penetrate into the sub-surface micropores without creating an impermeable skin that does not allow the rock to breathe.

325. The problem of selecting the most suitable consolidant for the Lalibela churches is not easy to solve. A water-repellent solution has been applied before, but if not regularly renewed, it has no lasting effect. For example, silicone does not penetrate very deep and is an expensive product.

326. Instead of using artificial water-repellent solutions, it is recommended to apply a "protective" coating made up of a very finely sieved lime putty and stone dust mixed with water-soluble casein and formalin (to stop growth). This protective film is reversible, does not harm the rock, and being finer than lime wash, it will not conceal the texture of the stone. The normal composition of the wash may be one part lime to 2-1/2 - 3 parts aggregate. This coating is cheap, easy to apply and locally available. If it proves successful for water-proofing the roofs and most exposed facades, it should be renewed annually before the rainy season starts in May.

Priorities for restoration

327. Two churches, Biet Amanuel and Biet Abba Libanos, are in special need of consolidation and restoration. Basically the work should follow the general recommendations set out in the preceding paragraphs, but far more will be needed than measures for preventive maintenance. A detailed plan, including the costs involved, needs to be worked out beforehand.

(a) Biet Amanuel

328. Biet Amanuel, a free-standing monolith, is the most ambitious of the Lalibela churches and is unique in its whole range of modified Aksumite features, such as a stepped podium, alternatively recessed and projecting wall surfaces, and protruding corner blocks for doors and windows imitating original timber construction. At the same time its plan is that of a true basilica, and the interior design reflects a complex range of early Christian architectural details.

329. After removing the unfortunate tar-based red paint from its surface, restoration work was started by Sandro Angelini. However, it was not completed, and the building's present appearance does not do justice to the exquisite carving. The church's precarious structural condition calls for major restoration work.

330. A detailed restoration project has to be worked out, but the extent of structural consolidation needed cannot be determined until additional information on the building's static stability has been gathered over the next few years and detailed survey drawings have been completed. In the meantime it will be necessary to erect a temporary roof cover, which can also be used during the actual restoration work.

(b) Biet Abba Libanos

331. The church has an open space only in front of the main facade which was severely damaged in the past; only half of it now retains its original monolithic construction, the south-eastern part having been rebuilt in masonry blockwork and rendered. Continuous exposure to rain and stresses caused by the weight of the overhanging cliff have caused much damage to the building which is in urgent need of structural consolidation and restoration. A carefully prepared survey drawing is a prerequisite for working out a detailed restoration project.

Clearing of surrounding trenches and ditches

332. The monolithic churches are a gigantic accomplishment in terms of engineering and continuity of effort. This unique complex of monuments has not yet been cleared to its full extent. Complete clearance will be a large-scale, labour-intensive operation, requiring the removal of an enormous volume of earth and the demolition or re-siting of some 130 houses, built on top of or close to the trenches.

333. Resettlement may require the planning of a new housing scheme, well in advance of the archaeological excavation work, in consultation with the Ministry of Housing and Urban Development within the context of urban development in general.

334. The work involved can be planned in full only when a complete topographical survey map of the village has been completed. The plan should likewise include landscaping of the site and the planting of olive trees and junipers, which help restore the natural peace of the site.

Area preservation

335. The setting of the churches within the village of Lalibela is a key element in the general atmosphere of the place. National legislation - either by decree or by formal administrative decisions - based on a plan for future village development, will be required in order to enforce measures for maintaining the integrity of both the landscape and the architectural heritage within the site. A protective development plan should be drawn up by the Ministry of Culture with a view to (i) formulating a policy for new village development, and to (ii) preserving the historic setting of the church complexes and the traditional housing in the vicinity of the monuments.

Zoning regulations and future village development

336. The lack of a topographical map of Lalibela is an obvious drawback for the formulation of any town plan to guide the village's future growth. Two particular problems arise in connexion with the town plan:

- (i) As it leads into the village from the south, the new access road, built 13-15 years ago with no underpasses, cuts right through the monument zone and crosses the river Jordan and several of the original drainage trenches.

337. It is recommended that arrangements be made with the District Road Construction Authorities for re-siting of the access road. The original course of the road, to the east and north of the monument zone, is still probably the best, though with some modifications. A careful survey needs to be carried out before the final decision is taken. Re-siting of the road would also help to promote new village development away from the land south of the village.

- (ii) The zoning plan should exploit the scenic attractions of Lalibela by keeping the built-up area on the slope of Mount Abuna Joseph, thus preserving the view of the valley below.

338. The hotel, school buildings and other new public service buildings which were started before the 1974 revolution but not completed are all rather haphazardly and obtrusively sited to the south of Lalibela. It would be advisable to locate new built-up areas with the dual purpose of creating a centralized urban centre, reminiscent of the village of terraced houses and "tukuls"; and keeping the new development zone away from the monument zone, thus leaving an undisturbed view of the surrounding landscape, while the churches themselves would lose nothing of their aura of another age.

Up-grading of traditional housing

339. The introduction of new building materials, especially cement and corrugated iron sheeting, has more than anything else changed the physical appearance of the settlement.

340. The corrugated iron roof is fireproof and easy to install, thus making it a popular new building material, but it is almost impossible to roof a circular house with square sheeting. Its introduction changes not only the roofing material but often also the basic shape of the "tukul", which is replaced by "modern" rectangular houses. Modern materials may also be favoured because of the higher status they confer, and be used simply for that reason, though many people find that a clay mortar floor with matting and a thatched roof is far more comfortable than a concrete floor and a tin roof.

341. Future development will largely depend on the housing policy to be adopted by the local authorities and the Ministry of Urban Development and Housing. All efforts to preserve the environment will be fruitless without the understanding and active support of all parties involved. And the initiative for preservation of the environment must come from the Ministry of Culture.

342. Two major initiatives would seem necessary:

- (i) That the Ministry of Culture co-operate with the urban planning authorities and the Kebelle association in drawing up zoning regulations and by-laws designed to preserve the vernacular architecture and the use of traditional materials in the vicinity of the church complexes.
- (ii) The repair and maintenance of residential houses would still be the responsibility of the owners themselves, but the general plan of action for preserving Lalibela's cultural heritage should provide for incentives such as subsidized building materials and technical assistance.

These simple measures should be introduced only after thorough discussions with the villagers to make them understand the intentions of the scheme.

Social up-grading

343. Restoration of the monolithic churches should be linked with a programme for up-grading living conditions generally, if the preservation of the cultural heritage is to have any meaning in a famine-stricken area. The Ministry of Culture may carry out specific programmes on its own initiative, but other schemes implemented in co-ordination with other ministries and Agencies may help alleviate hardship in the area. The Ministry of Culture could act as a catalyst in these endeavours.

Handicraft production and small-scale industries

344. There is now one "souvenir shop" with local handicrafts for sale - new and old - but everyone in the street offers personal belongings for sale because of the critical situation in Lalibela generally. There is also the ever-present - and understandable - temptation to sell artefacts and treasures from the churches.

345. As a greater inflow of tourists is envisaged, it will be important to organize sales through co-operative community groups, selling at fixed prices. The regular production of local handicrafts should be organized with assistance from the Handicrafts and Small-Scale Industries Development Agency (HASIDA). A special feasibility study would be needed to estimate the costs involved.

PART VI

LAKE TANA'S CHURCHES AND MONASTERIES

Historical background and geographical setting

346. Lake Tana, situated to the far south of the Gondar region, has a surface area of over 5000 square metres and an altitude of 1830 metres above sea-level. The Blue Nile flows out of the lake near Bahar Dar and about 30 km. down drops 45 metres at the spectacular Tississat Falls. Of its more than 30 islands, some 20 have ancient churches and monuments, spectacularly perched on the highest point. Many of them are still in daily use.

347. The whole setting is one of peace and harmony. The lake shores support a lush vegetation of papyrus and brushwood with occasional giant junipers and baobabs, while boats, locally called "tankwas", which are made by binding papyrus stalks together, just as they were in ancient Egypt, are still used for sailing its waters.

348. The islands thus provided an ideal setting for the establishment of churches and monasteries which played a leading role in Ethiopia's struggle to maintain the Christian faith against successive waves of Muslim invaders in the 14th, 15th and 16th centuries.

349. Much of Ethiopia's early ecclesiastical art and literature was destroyed elsewhere in the 16th century when the Islamic faith spread into the highland plateau. But treasures were zealously guarded on the islands, whose churches still possess many of Ethiopia's oldest manuscripts on parchment and finest examples of religious art.

350. The ecclesiastical importance of Lake Tana also coincided with the rise of the Solomonid dynasty (so named because its traditional genealogy begins with Menelik I, son of Solomon and the Queen of Sheba). The Solomonid kings established a new capital in Soudan in the 1630's and patronized the building of many of Lake Tana's churches adorned with mural paintings of biblical scenes. The buildings and paintings have survived down to the present day as a unique inheritance from Ethiopia's mediaeval past.

Architectural form

351. The sixteenth century witnessed a change in the plan of Ethiopian churches. The churches of Aksum and Lalibela reflect early Christian influences in their basilican plan. From the sixteenth century onwards, however, in the province of Shoa and west of the southern and western regions of Ethiopia, round churches with conical roofs reflecting native building traditions make their appearance. They are still divided into three parts, known as the magdas (inner sancturary), which is an isolated square masonry structure in the centre of the building, crowned with a rounded drum to support the central part of the conical roof; the kiddest

(inner ambulatory) where worshippers attend mass; and the bene mahlet or outer ambulatory used for communal gatherings or simply as a place to rest. The mural paintings are the most spectacular adornment, usually on the outer wall of the magdas, for worshippers to look at during mass.

Mural paintings

352. The wall paintings were prepared on plain-woven raw cotton canvas attached to the supporting wall with animal glue. The whole composition was first drawn in outline, the heavy contour lines often remaining part of the final painting. The various sections were then tinted with natural colours made from various earth pigments, mixed with egg-white or milk. The predominant colours are green, blue, red and yellow; gold is very rare and was generally added at a later date.

353. The paintings are mostly inspired from copy-books with outlines of pictures often going back to the days of early Christianity. The subjects represented are mainly Bible stories and lives of the saints illustrated imaginatively in bright colours, often framed with tracery and ornamental foliage. The style is closely related to Byzantine models, but the execution is peculiar to Ethiopia and quite unlike religious paintings found in any other part of the Christian world.

Illuminated manuscripts and other church treasures

354. The ornamental paintings are enlarged copies of the smaller pictures found in illuminated manuscripts, traditionally on parchment, great numbers of which are in the possession of every church.

355. Very few of the manuscripts can be reliably attributed to the beginnings of the Solomonid dynasty in the 13th century, but a number of 14th and 15th-century manuscripts have fortunately survived in Lake Tana's church and monastery collections. The earliest Bible manuscripts pre-date the mural paintings, none of which is older than the 17th century, but most of the manuscripts are later copies, executed in the same style as the originals.

356. Some of the most exquisite examples of Ethiopia's illuminated manuscripts were published in 1961 under the auspices of Unesco in an album of colour reproductions¹ and are thus accessible to a few persons outside Ethiopia. Others can be consulted in such large collections as the British Museum Library, the Vatican Library, the Bodleian Library, the Cambridge Library, etc. But in Ethiopia itself, where the manuscripts originated they are in daily use for liturgical and teaching purposes. The preservation of this important part of the cultural legacy is thus a very heavy responsibility.

357. Not only the illuminated parchments, but also such other church treasures as processional crosses and vestments are in a rather precarious condition and urgently in need of restoration.

¹ Ethiopia: Illuminated Manuscripts, published by the New York Graphic Society by arrangement with Unesco, 1961. Introduction by Jules Leroy; text by Stephen Wright and Otto A. Jäger.

Selection of individual buildings for repairs

358. The following six churches, still in use today, were selected for inclusion in a possible preservation programme, in view of their special importance.

(a) Kebran Gabriel Church and Monastery

359. The Kebran Church of St. Gabriel was built during the reign of Amda Seyon (1314-1344) and reconstructed in the late 17th century. After severe damage by lightning in the middle of this century, the church was finally restored in 1963-64. During this operation, 16 of the original pillars of the outer colonnade were re-built, and the original thatched roof was replaced by corrugated iron sheets. When the building was again repaired in 1978 under the direction of CRCCH, an unsightly cement rendering was applied to the pillars.

360. The building is circular in form with an area of approximately 530 square metres. Twelve additional pillars in the Kiddest support the roof structure. Walls and pillars are constructed in quarried, red volcanic rock, which is said to originate from Dunkaz, whereas lime was brought from Densa (according to information in R.E. Cheesman: Lake Tana and the Blue Nile, London, 1936).

361. Fragments of the 17th century wall paintings were still visible on the northern part of Magdas and door panels in the early 1970s. The canvases, measuring some 10 square metres, were taken down, and have recently been safely stored on plywood with a protection of cotton gauze. When previously stored under plastic sheets, the paintings were badly damaged by moisture accumulation, resulting in flaking away of the paint layers and fading or discoloration of the pigments. As the exact position of these canvases in the church is unknown, they should not be put back. In view of their great historic and artistic value, it is recommended that they be restored and later displayed in a museum. The mural paintings, which are still in situ on the Magdas and its upper drum, date from the reign of Yohannes IV (1868-1889).

362. A total of 180 items from this church have been registered by the Inventory Section of CRCCH. They include some 50 manuscripts, several of which date back to the 15th century and perhaps rank among the most valuable manuscripts on parchment in Ethiopia; one of them was reproduced in the Unesco album on Ethiopian manuscripts.

363. An interesting "phonolite" composed of two large bells made of slate stand within the church grounds. The church also owns a cast bell with a bold dedication in the Ge'ez language: "This bell of the King of Kings, Alam Sagad, by the mercy of God, named Fasilades, gave it to the Ark of Gabriel of Kebran" (translation by Cheesman).

(b) Ure Kidane Meret Church, Zeghie

364. The church was originally founded during the reign of Amda Tsion (1314-1344) and re-built in the late 17th century. It is reported to have been restored in 1902. The church compound has seven more utilitarian buildings, including a new one in the traditional style intended for future use as a small local museum. The church was formerly a monastery, but it is far less isolated than others found on the islands, and is now clearly a part of the local community.

365. This imposing circular church stands on a plinth of several steps with an outer colonnade of 42 very large timber posts. The total floor space would be approximately 700 square metres. The type of masonry construction is not known, as the walls have been newly rendered with "chika" plaster.

366. The profusion of mural paintings cover 325 square metres of the outer wall and drum of the Magdas and 8 square metres at the top of the outer circular wall, the latter part being now in a poor condition. Another 16 square metres of paintings have been taken down and are now safely stored in one of the church's annexes, awaiting restoration. As the original position is not known, the canvases would be best kept in a museum.

367. In addition, the church owns a very rich collection of royal insignia, liturgical objects and parchment manuscripts - a total of 447 items as registered by the Inventory Section of CRCCH.

368. The new annex building was completed about ten years ago at a total cost of 150,000 Eth Birr. It has a floor area of about 100 square metres and is well constructed in the traditional style; it thus tones well with the environment. However, the dimly lit interior is not ideal for display purposes. Rather than electric lighting, a number of "petromax" lamps could be used to provide sufficient light for visits to the museum. Another building with better natural lighting could possibly be designed for exhibition purposes, leaving the existing structure for storage of the church treasures. They are so rich as to justify a permanent exhibition, thus making the church one of the major tourist attractions in the area.

(c) Nagha Selassie Church

369. The Nagha Selassie church and monastery, dedicated to the Holy Trinity, is located on the small wooded island of Nagha joined to the western shore of the island of Dek by a low isthmus, which can be crossed in the dry season only.

370. It was built in 1747 under the patronage of the renowned Empress Mentuab (1730-1755), who followed her husband, the Emperor Bakafa (1721-1730) to the court of Gondar. A devout lady, she was a great patron of art and architecture in Gondar and elsewhere, as witnessed by the delicately built castle of Mentuab and the ruins of Qusquam palace and monastery.

371. The Nagha Selassie Church, with the domes and turrets of the three gate houses, is closely related to the late Gondarian style. The moulded imposts and the finely carved voussoirs of the arch forming part of the outer colonnade are classical architectural details, which may be due to the Jesuit priests at the court of Gondar.

372. Unfortunately it was drastically renovated by an Italian entrepreneur Buschi (?) in 1956, who ruined the appearance of the building by replacing the entire roof with corrugated iron sheeting. Moreover, the fierce heat of the sun on the tin roof now creates problems of condensation. The original collar beams and wall plates, which must have been of timber, were replaced with an obtrusive reinforced concrete structure greatly diminishing the integrity of the building; furthermore, the structural walls were most ungracefully rendered with a hard, steely-looking cement plaster, which has now started to crack and peel off, thus necessitating complete renewal of the surface rendering.

373. The murals of the maqdas' outer walls have an area of approximately 400 square metres, and are about the best preserved ecclesiastical mural paintings from the 18th century. They depict scenes from the Old and New Testaments and other spectacular scenes glorifying the Emperor Bakafa.

374. The Inventory Section of CRCCH has listed a total of 50 items, comprising manuscripts, processional crosses, a remarkable seventeenth-century work illustrating the Miracles of Christ and a large eighteenth-century triptych depicting nine scenes of the Passion.

(d) Daga Istaphanos Church

375. The church is perched spectacularly at the very top of the cone-shaped island of Istaphanos and is surrounded by dense forest and undergrowth. Being the most prominent landmark of the lake area, the island is considered sacred. The church and the monastery played an important part in Ethiopia's history, but the present building is of no particular architectural distinction, having been completely re-built in 1880 with no special regard for refined craftsmanship.

376. Like the Tana Cherkos church, the building has a rectangular plan rarely found in Ethiopia. It is divided into three parts with the Maqdas facing east. The load-bearing walls are of irregular rubble construction, with the stones embedded in clay mortar and rendered by "chika". The thatched roof has an overhang providing for an ambulatory.

377. The stuccoed paintings, covering a total area of some 150 square metres, were taken down while restoration work is being carried out. The canvases have been relined, but they have not yet been cleaned and restored. The paintings date mainly from the 19th century, but one old fragment was signed and dated by Feré Syon, an artist attached to the court of king Za'ra Yakob (1597-1603).

378. Apart from a total of 85 registered items (liturgical objects and parchments), the treasure also includes coffins containing the bones of seven Ethiopian kings. The most notable is the mummified body of Emperor Fassilides¹ (1632-1667).

¹ I also spelt Fasilades and Fassilades.

379. The treasure building adjoining the church is too small to house this great wealth of material. An extension will eventually be needed to provide for a better display of selected objects for visitors invited to see the treasures. The present use of torches and candles to give light is an obvious fire hazard, which would be greatly reduced if "petro-max" lamps were introduced. The treasures would also be more safely guarded in such an extension, with natural lighting. As a security precaution the openings should be fitted with strong shutters, which would normally be kept closed, thus reducing the deterioration caused by the ultra-violet rays of sunlight.

(e) The church of Tana Cherkos

380. The promontory of Tana Cherkos projecting from the eastern shore of Lake Tana provides a remarkably beautiful setting for the church and monastery.

381. Several legends refer to the founding of the church in the fourth century well before Christianity could possibly have been introduced into the area. In any case, the church played an important part in the history of the royal Solomonid dynasty and early Christianity in Ethiopia.

382. The present church was built in the late nineteenth century by Ras Gugsa of Debra Tabor during the reign of Menelik II (1889-1913). It is rectangular, like Daga Istaphanos, whereas other churches on Lake Tana are circular, and the construction is very similar. The fabric is in a bad state of repair: the thatched roof is worn down, the west wall is badly damaged, and the wood-work is infested with insects.

383. There are no murals now, but the church possesses 30 valuable manuscripts. Of special interest are two fifteenth-century "folding books" depicting saints. The largest is 75 cm high and unfolds to a length of 5 metres - a marvellous example of polychrome Coptic art. It was shown in international exhibitions on Coptic Art in Essen (1963) and Paris (1964).

384. The valuable manuscripts in the church's collection include an illustrated parchment recounting the life of the renowned saint Tekla Haymanot, who lived in the 13th century. Near the church stand some large, hollowed-out dressed stones, which are claimed to be sacrificial stones used in Jewish rites.

(f) Medhane Alem Church, Rema

385. The church and monastery are said to have been founded in the fifteenth century by the brother of King Yeshaq (Isaac I, 1414-29). The church, rebuilt in the late nineteenth century by Ras Gugsa of Debra Tabor, has the traditional circular plan. The walls are constructed of irregular rubble embedded in clay mortar and plastered with "chika". At present the building is in a poor condition, but the thatched roof is being repaired by the priests themselves.

386. Murals remain on two sides of the Maqdas painted in an early Gondar style probably dating from the 16th - 17th century. The canvases on the south wall, which is normally reserved for the life of the Virgin Mary, here depict the legend of the saint Waleta Petros, who died in 1644 and is buried in the church.

387. The treasures, none of which have been registered, include several painted wooden diptychs and triptychs, the style and subject matter of which are identical to those found at Daga Istaphanos and signed by Feré Syon, painter to the court of Zára Yaqob (1434-1468). The church also owns 15 manuscripts dating from the fiteenth and sixteenth centuries.

388. The restoration of the Lake Tana churches is a dual operation involving carefully co-ordinated work on the paintings and the buildings themselves. Only a few general problems will be discussed hereunder, since it is beyond the scope of the present report to set out detailed instructions for the two operations.

RECOMMENDATIONS

(a) Elements in wood

389. As much as possible of the old timber must be re-used for conservation purposes, not only for economic reasons, but also to preserve the character of an old building.

390. Roofs or timber-framed structures should be repaired bay by bay, for if a historic structure is taken down completely it may not be possible to re-assemble it.

391. If possible, the principal structure should be repaired in situ without aiming at working to plumb and level. The deformations caused by centuries of weathering and aging should be regarded as part and parcel of the building's historic integrity. For instance, the complete renovation of the old timber parts of the Debra Sinai church, Gorgora, was a decisive factor in preserving the authenticity of the building.

392. It is generally possible to cut away decayed parts and effect repairs by scarfing in new timbers, even using concealed iron or steel flich plates, if considered necessary for structural reasons. Any new materials added to the old should be a copy of the original and be carefully joined with the old ones. The structure should be fully documented prior to the commencement of work, any new member that has to be inserted should be inconspicuously dated or identified in some other way as a new structural or decorative element.

393. The general aim should be to repair in situ. Only if the timber structure is so decayed and weakened that it is beyond repair will it be necessary to dismantle the frame and re-erect it after thorough renewal of the deteriorated parts. New timber should be of the same quality as the original and well seasoned before use.

394. For the control of termites and other insect pests, different types of chemical treatment can be used in combination with various wood preservatives for protection against weathering. The selection of a suitable preservative, whether it be tar-oil, an organic solvent, or a water-soluble preservative may depend on its price and availability on the local market. If the preservative has to be imported, water-soluble types may be preferred as they can be imported in solid form and added to water as required.

395. Cleaning and consolidation of wooden parts is recommended for Lake Tana's churches, following the methods used on ICCROM's advice in the Debre Berhan Selassie church, Gondar. The treatment is carried out in two stages: the untreated wood is first cleaned with a 5 per cent solution of ammonia in water and then treated with a 3 to 5 per cent solution of acrylic paraloid B72 in tydol.

396. In any case great care should be taken not to remove the pleasing silver-grey patina of all exposed timber which is the result of a long period of weathering and gives the building its special character.

397. Door and window frames, shutters, door panels, etc. are generally made of Wanza wood, transported from the southern regions of the country. Being a hard wood, it is extremely resistant to weathering and insect pests. When decay sets in it is normally due to building failures or faulty design of the building.

(b) Walls

398. Two main types of walls are found in Lake Tana's churches: (i) dressed stones built in courses and bonded with lime mortar often rendered with a lime stucco, and (ii) uncoursed irregular rubble embedded in clay mortar and plastered with "chika"¹. The walling material determines the whole character of a building, and it is important to observe and respect the original method of construction in any repairs and restoration.

399. The use of clay mortar and "chika" should be continued. It is a cheap and sound material as long as the walls are kept dry. Any presence of water, however, makes the clay and straw vulnerable to deterioration, and all possible measures should be taken to prevent the percolation of rain-water and damp rising from the ground. It is therefore essential to set up a regular preventive maintenance programme. In the case of all old buildings: "A stitch in time saves nine".

400. Limestone is rare in the area, and since only the royal family and the nobility could afford to pay for its transportation, it is seldom used for building. However, such churches as Kebran Gabriel and Narga Selassie, with their more elaborate craftsmanship and design and expensive building materials, will justify the continued use of lime for the repair and rendering of masonry walls. There is no need to reiterate the disadvantages of using Portland cement in repairing historic buildings. The inner structural walls in which the doors and windows are set are generally rendered with lime stucco, creating an increasing refinement from the exterior to the interior of the building, culminating in the mural paintings.

401. The colour and the texture of the stucco will all depend on the type of aggregate mixed with the lime, and careful experiments should be carried out to determine the best proportions of the various constituent parts. Fuller details are given in Neville Hill's technical report on the possibilities of re-establishing the production of lime around Gondar (Unesco, 1979).

1 The "chika" is made from clay, locally available, which is moistened, mixed with chopped straw and kneaded to a workable consistency before being applied to the walls.

(c) Roofing

402. One of the major "improvements" to church buildings in the past has been to replace the traditional thatch with corrugated iron sheeting for roof cover. However, the latter is considered unsuitable as a roofing material for several reasons: (i) During the day it causes excessive heat accumulation from strong solar radiation, thus resulting in dangerously high hydro-thermic variations as between day and night inside the building. (ii) The sudden fall of temperature at sunset generates heavy condensation on the lower side of the tin roof, and the water will naturally affect the construction. (iii) Finally, the corrugated iron roof is unaesthetic, and incompatible with an historic building. A Hygrothermographic record prepared before and after restoration of the Debre Berhan Selassie Church is given in Appendix F of the Terminal Report on Project ETH/74/014¹.

403. Plastic sheeting was inserted below the thatch of the newly restored church of Debre Sinai Mariam at Gorgora. It is questionable, however, whether this practice should be adopted generally in church restorations, unless sufficient ventilation is provided between the thatch and the polythene sheeting. Without such ventilation the thatch may be liable to rot. If some sort of additional protection for the upper part of the walls and the mural paintings is considered necessary, a coping together with a carefully designed flashing, or an impermeable section to prevent drip at the top of the drum may be a more appropriate solution in order to throw possible water clear of the wall paintings and prevent any damage from percolating rain water.

(d) Restoration of mural paintings

404. The specific problems involved in the restoration of mural paintings were studied during one inspection mission and three working missions of painting restorers from ICCROM² under special contract within the framework of the Unesco/UNDP-assisted Project ETH/74/014.

405. The missions were undertaken for the purpose of (i) conserving the mural paintings of the Debra Berhan Selassie Church, Gondar, which was selected as a pilot project, (ii) adopting work practices and principles which can serve as a model for continuing conservation efforts, and (iii) providing on-the-job-training and screening of potential Ethiopian restorers, who can continue work independently after they have obtained the required experience.

406. The work carried out during the ICCROM missions is described in three reports from August 1979, April 1981, and December 1983 respectively.

Summary of main problems of deterioration of mural paintings

407. The two main causes of deterioration of mural paintings are humidity, and attack by insects, birds and bats.

¹ See Annex III of the present report, item 17.

² International Centre For the Study of the Preservation and the Restoration of Cultural Property, 13 via di S. Michele, 00153 Rome, Italy.

- (i) Humidity - either in the form of rising damp, condensation or percolating rain water - is largely responsible for the deterioration not only of the organic adhesives used for mounting the fabric to the backing material, but also of the preparation and paint medium. The most important preventive measures involve provision for a tight and well insulating roofcover, which can prevent constant diurnal hygro-thermic variations. It is likewise important to ensure that rainwater is being well drained off the ground.
- (ii) Great care should be taken to prevent the kind of damage which insect pests inflicted in the church of Debra Sinai Selassie, Gorgora.
- (iii) Bats are undoubtedly one of the major active causes for the deterioration of the paintings. By hanging directly on the paintings on the upper parts of the central drum of the inner sanctuary, the bats abrade the paint, fray the canvas, and ultimately pull it loose from the ceiling. Their action, combined with the weakened state of the fabric and paint layer from previous infiltration of water, seriously threatens the survival of the paintings.
- (iv) Likewise, the paintings and the "chika" backing material are often fouled and pecked by pigeons. The excrement of birds and bats is both alkaline and acid, and hastens decay of the wall paintings' surface from which the dark deposits are difficult to remove.

When this damage is explained to the priests, they will surely take steps to prevent birds and bats from entering the church by closing it at dusk. With little aesthetic loss, pigeons can be kept out with inexpensive wire netting and spikes can be placed on flat shelves and timber beams where pigeons usely perch.

- (v) It should be noted that the aim of restoration is to preserve and display to best advantage what remains of the original paintings rather than to recreate or make new again.

Current needs for conservation and restoration of mural paintings

408. A full inventory of mural paintings, including photographic documentation and survey drawings, has been initiated; it would appear necessary to build up separate files for each church. The following list, far from exhaustive and not arranged in order of priority, gives an idea of the extent of murals in need of restoration.

- Debre Berhan Selassie church, Gondar (a total of some 260 sqm. was restored during the ICCROM missions)	30 m ²
- Debre Sinai Mariam church, Gorgora, Lake Tana	180 "
- Narga Selassie church, Lake Tana	400 "
- Kola Arsima Sematat church, Dek., Lake Tana (1)	385 "

- Daga Istaphanos, Lake Tana	150 m ²
- Medhane Alem church, Rema, Lake Tana (1)	100 "
- Ura Kidane Mehret, Zeghi, Lake Tana	385 "
- Kebran Gabriel church, Lake Tana	110 "
- Ura Giorgis, Lake Tana (1)	150 "
- Fassilides Castle, Gondar	14 "
- Biet Mercorious, Lalibela, Wollo	5 "
- Biet Mariam, Lalibela, Wollo	200 "
- St. Mary Cathedral, Aksum, Tigré (1)	<u>254 "</u>
Total area of murals in need of conservation and restoration	2078 m ²

(Churches marked with (1) were not visited)

Need for further training of painting restorers

409. It would be difficult to estimate the time and work load involved in complete restoration of the above list of murals. What is certain is that the present staff of two painting restorers and two assistants cannot possibly cope with the large number of murals in immediate need of repair and the continuing task of preventive maintenance throughout Ethiopia.

410. It would be desirable to train at least four painting conservators and four assistants as soon as possible. Likely candidates could be recruited from the Fine Arts School in Addis Ababa, but as its curriculum does not yet include training in the restoration of mural paintings, provision should be made for further training abroad as soon as possible.

411. Some training abroad has already been provided (ICCRUM course on mural painting conservation for 4 months and two years' training in Denmark under a bilateral assistance programme). It would be desirable to maintain contacts with these two institutions.

Proposal for setting up a painting laboratory

412. The treatment of paintings is a highly specialized operation which is best carried out in situ, due to the risk involved in transporting fragile canvases over long distances. The majority of paintings are still in their original locations, and it is recommended to establish temporary site-camps at the respective places of work. A list of field equipment and materials not readily available in Ethiopia is given in annex XI of this report.

413. More complicated restoration work, such as relining of canvas, may be more conveniently carried out in a workshop. The extent of mural paintings in the Lake Tana area justifies the creation of a permanent conservation laboratory in Barhar Dar, which could be housed in the proposed Regional Museum.

Recommendations concerning establishment of a Regional Museum

414. Although Bahar Dar in the province of Gojam is a relatively new town with no important historic heritage of its own, its attractive situation on the southern shore of Lake Tana would make it an excellent point of departure for tours to the various islands and other places of interest in the area. In view of the Ministry of Culture's general plan to develop regional museums in all 14 provinces, Bahar Dar would be the obvious choice for the Gojam regional museum.

415. During the consultant's short stay in the town it was not possible to identify any existing building suitable for conversion into a museum; the best solution would probably be the construction of new premises.

416. Apart from serving an educational purpose, the museum would be a magnet for visitors if built on an attractive site close to the lake. The architect's brief should possibly provide for a phased development plan aiming ultimately at a total floor area of 850 square metres with fairly equal importance given to the museum's three major purposes: (i) study and documentation, (ii) conservation, and (iii) education and culture. Although the northern part of Lake Tana is administratively attached to Gondar, preservation of the cultural heritage of the whole lake and its immediate surroundings could well be administered from Bahar Dar.

RECOMMENDATIONS

417. The floor area of the museum when fully developed could possibly be distributed as follows:

(i) <u>Permanent exhibition:</u>	
- display area of ecclesiastical art (processional crosses, garments, illuminated manuscripts, paintings, etc.)	100 m ²
- exhibition on monastic life, building of traditional reed boats ("tankwas"), etc.	100 m ²
- natural history, wildlife, history of the discovery of the sources of the Blue Nile	100 m ²
(ii) <u>Changing exhibitions and public service area</u>	100 m ²
(iii) <u>Internal functions:</u>	
- storage and documentation	300 m ²
- conservation laboratory and workshop	100 m ²
- office and administrative offices	50 m ²
Total floor area,	850 m ²

418. The above proposals do not imply that all the museum's facilities have to be housed in one building only, and it is recommended that the design should include space for outdoor exhibitions and working areas. A modest beginning with the museum could be made in Zeghi, where a traditional building close to the Ure Kidane Mehret church was completed a few years ago for museum purposes; it cannot, however, serve the future needs of a Regional Museum in Bahar Dar.

419. Since the churches constitute so important a part of Ethiopia's cultural heritage, their preservation should be a matter of Government concern. Adequate assistance to the church should be provided for the continued maintenance and repair of the buildings, which would be difficult to maintain if no longer in daily use.

Recommendation on film documentation

420. Films are an important means of mass communication, and film-making is recommended as one of the activities aimed at promoting the International Campaign for the preservation of the cultural heritage.

421. A documentary film on cloistered life on the islands of Lake Tana should be high on the list of future film productions. Whether it is produced by the Film Centre under the Ministry of Culture, by the Ethiopian Television, or is a co-production with a foreign film company or institution, it is important that the filming should be done in an atmosphere of mutual trust between church and producer. The film should aim at giving a faithful picture of the life of the monks and their artistic achievements over the centuries. If this way of life were to disappear in the near future or undergo radical changes, the documentary evidence the film provides would be of all the greater scientific value.

Development of tourism

422. The Lake Tana area has a considerable potential for the development of tourism owing to the great number of historic monuments and the beauty of the landscape. An additional, intangible attraction of the Lake Tana area for international tourists is that it is the very source of the Blue Nile. European explorers of the nineteenth century were obsessed with the search for the source of the river Nile, and present-day tourists still associate the Nile with the civilization of ancient Egypt and the Coptic church.

423. Tours from Bahar Dar may include visits to several of the islands and churches, including the Tississat Falls and the ancient bridges of the Blue Nile. The ordinary tourist would want to spend several days in Bahar Dar to visit these sites, while those specially interested in the lake's churches and monasteries would need a week. All tourists arriving at Bahar Dar on group tours arranged through the National Tourist Organisation (NTO), pay the modest sum of 4 Eth. Birr as a contribution to the upkeep of the churches and monasteries. This is a very small amount in comparison with the high cost of these organized tours, and the Ministry of Culture would be justified in claiming a larger share of the income from tourism in the area to assist in financing the upkeep of buildings.

424. Hotels of tourist standard include the old Bahar Dar Hotel (30 double-bed rooms) and the new Tana Hotel (64 double-bed rooms), but few tourists now visit Bahar Dar, and little information is provided on the surrounding area.

PART VII

THE CASTLES AND PALACES OF GONDAR

"... one of the most marvellous of buildings worth of admiration, and the most beautiful of outstanding wonders".

(the Yemeni ambassador, Hasan ibn Ahmad al-Haymi, 1648).

Environmental setting: Geography, climate and population

425. Gondar is the administrative centre of the region of the same name which extends northwards from Lake Tana and borders the provinces of Eritrea and Tigray to the north. The region includes the Simien National Park with several of Ethiopia's tallest peaks, including Ras Deshen reaching 4,543 metres.

426. The park, which is world-renowned for its wild scenery and its many rare native birds and mammals, has been included on the World Heritage List.

427. The city is situated on a flat volcanic ridge at an altitude of 2100 metres above sea level. It is ringed to the north by high mountains, which in the past afforded military protection, and today are enjoyed for their fine scenery. To the south the ridge descends to the fertile plains of Dambiya and Lake Tana 65 km. away.

428. At the height of the Gondar dynasty's power in the late seventeenth century, the city's population was estimated at about seventy thousand. By the nineteenth century it had declined to a few thousand, but Gondar has regained some of its former importance as a political, commercial and religious centre. A local census around 1958 by the Gondar Public Health College estimated the population at 20,000; this figure may now have risen to above 83,000 in the main city.

429. The climate of Gondar has very slight average annual fluctuations. The warmest period is from end-March to end-May when the rains begin and lower the temperature. The monthly temperatures throughout the year rarely fluctuate more than 4°C, the annual average being 19.2°C (information taken from Masterplan for Gondar, Ministry of Interior, Municipalities Department, 1967 (consultants Barucci, di Gaddo and Sacco)).

430.

Table 5: Temperatures of Gondar (average monthly - average minimum - average maximum in degrees Centigrade):

	Monthly	Minimum	Maximum
January	18.4	9.5	28.0
February	20.2	11.6	28.9
March	21.2	13.3	28.7
April	21.1	13.9	28.6
May	21.3	14.1	27.4
June	18.8	13.1	23.8
July	17.4	13.0	21.7
August	17.2	12.7	22.5
September	18.3	12.3	25.2
October	19.2	12.0	26.0
November	19.7	11.5	26.7
December	18.4	10.2	26.5
Range of Temps.	4.0	4.6	7.2
Average Annual	19.2	12.3	26.3
No. of years	4	5	4

431.

Table 6: Rainfall of Gondar (mm)

	Average Monthly	No. of rainy days	Highest rainfall in 24 hrs.
January	2.2	1	40.0
February	15.5	5	22.0
March	16.7	5	61.9
April	55.1	11	31.4
May	70.8	9	45.8
June	188.4	21	75.0
July	332.5	28	57.2
August	353.6	27	62.3
September	140.4	20	41.2
October	46.9	8	23.8
November	46.4	5	38.5
December	19.8	3	46.5
Total	1,288.3	143	

Highest rainfall 1,409.8 mm

Lowest rainfall 1,115.8 mm

The figures on precipitation date from the years 1954 to 1959.

After recent droughts in the area the present figures may be very different.

Historical background and influence on town development

432. The first permanent royal settlement in the area was built by the Emperor Sarsa Dengel (1563 - 1597) at Guzara in the Infrace area immediately to the north-east of Lake Tana some 60 km south-east of Gondar. This impressive fortified structure dating from around 1570 is now partly in ruin, but it is very important from an antiquarian point of view, since it is reported that it has never been restored, and may thus give important archaeological information on the building techniques used in early "Gondar architecture".

433. Foreign influence on architecture in the Gondar area is most noticeable at Old Gorgora on the northern shore of Lake Tana, where Emperor Socinios (1607 - 1632) built a palace, known as Maryam Ghemb. Alongside it is an unusual monastic church complex in the Baroque style with a ground plan closely resembling that of European convents; it also has finely carved mouldings and other decorative elements.

Note

434 As the early examples of Gondar architecture mentioned above were not visited during the consultant's mission, no recommendations for restoration or consolidation are provided in the present Master Plan. But their unique historic and archaeological interest would obviously justify plans for their preservation as important archaeological sites within relatively easy reach of Gondar. Gondar itself and the surrounding area have some twenty palaces and other royal buildings and about thirty churches, all built during the "Gondar period" (17th - 19th century), and in need of a more detailed survey than has previously been carried out. In the present report, only three sites in Gondar itself or its immediate vicinity are described in detail with recommendations for their restoration, namely the Fasil Ghebbi group of monuments; the Bath of Fasilides; and the Cusquam Palace and church. All these monuments were included on the World Heritage List on 26 October 1979 because of their outstanding universal value. Together with the stelae of Aksum and the monolithic churches of Lalibela, they remain the most impressive visible reminder of Ethiopia's past history.

435 The decline of Lalibela's Zagwe dynasty in the thirteenth century was followed by centuries of warfare against Muslim invaders, during which time the Solomonid rulers moved their court frequently. After settling mainly in the province of Shoa, they moved to the Lake Tana area, until in 1636 the Emperor Fasilides¹ established his capital in Gondar, which remained for about 250 years the centre of Ethiopian Government.

436. In the first decades of the sixteenth century Ethiopia was under continuous pressure from Arab and Turkish warriors under the command of Mohammed ibn Ibrahim, surnamed by the Christian Ethiopians Grañ and by the Muslims "the Conqueror". He succeeded in gaining control of extensive areas of the central highlands except for the Lake Tana area, which remained a last resort. He was ultimately defeated with the help of Portuguese troops. Closer relations between Ethiopia and the western world, especially Portugal and the Holy See, and the need to obtain European aid against the Muslim danger gave the Roman Catholic Church an opportunity for an attempt to arrive

¹ Sometimes spelt Fasilidas or Fassilades

at a full union with the Ethiopian Church. Jesuit missionaries propagated the Roman Catholic faith and had a short but marked influence on the development of architectural form and construction by introducing the masonry arch and vault and the use of lime in mortars.

437. Foreign influence on the mode of construction was further strengthened by Indian master builders, who were brought from the Portuguese colony of Goa. However, the Emperor Socinios¹ conversion to the Roman Catholic faith created much controversy with the Ethiopian Orthodox Church. In 1632, Socinios abdicated in favour of his son Fasilides, who expelled the Jesuits from the Ethiopian realm and in 1636 established a permanent capital at Gondar, where he built the first palace, 67 kilometers north of Lake Tana. Each of the successive kings built castles and churches and enlarged the royal compound, which developed as a fortified town, called Fasil Ghebbi, within the surrounding city with its more humble dwellings.

438. Gondar declined considerably as a result of civil wars from the late eighteenth century onwards during a period when the centralized kingdom gradually broke up into independent units centred in the regions of Tigray, Amhara, Gojam and Shoa. The town continued to be at least the nominal capital during the whole of the eighteenth century, but one result of this troubled period was that no fewer than twenty-five emperors were deposed in the century and a half between Iyasu (1682 - 1706) and Tewodros² (1855 - 1868).

439. By the mid-nineteenth century the city lost its status as the capital of the Empire, when the Emperor Tewodros transferred his government to Debra Tabor and later to the mountain fortress of Magdala. The Emperor's reprisals against Gondar resulted in considerable destruction and pillaging of property. Fortunately hundreds of manuscripts from Gondar churches were preserved and eventually found their way to the British Museum after the Napier expedition against Tewodros in 1868.

440. Gondar suffered further serious depredations in 1887 when an army of dervishes invaded the country as a consequence of war with the Mahdists of Sudan. What remained of the former splendour of the royal capital was described at the beginning of this century as "a dead city which belongs only to the past".

441. It revived again, however, because of its favoured location, and has maintained its role as the principal town and transport centre of north-west Ethiopia. Much rebuilding of Gondar took place during the Italian occupation, when it was made capital of Amhara, one of the five large provinces into which the country was then divided. A number of roads and modern buildings were constructed in the present centre of the town, and parts of the old castles were restored. In the battle of Gondar in late 1941 the British defeated the Italian occupying forces, thus dealing the final blow for the liberation of Ethiopia.

442. The post-war years saw the establishment in Gondar of a Public Health College to train medical practitioners, and a Teacher Training Institute opened recently in addition to the three existing high schools.

1 also spelt Susenyos

2 also spelt Theodore

A number of public administrative and other facilities are centred in Gondar, including a newly completed government hotel, while a meat-processing plant is initiating industrial development.

Earlier restorations of the Gondar castles

443. Photographs from various sources show the ruined state of the structures totally overgrown by vegetation in the 1930's. For example: (i) Guebré Selassie: *Chronique du Règne de Menlik II - Roi des Rois d'Ethiopie*, vol. I-II, Paris 1931 (plate LIX, vol. I), and (ii) A.A. Monti della Corte: *I Castelli di Gondar*, Rome 1938. (iii) Some early photographic documentation can also be found in Rosita Forbes: *From Red Sea to Lake Tana* (1918-20), New York 1935.

444. Various rebuildings and repairs were undertaken from the late 1930's to the late 1960's. Under the Italian occupation (1936 to 1941), extensive and radical restoration work was done on many of the monuments, using cement and reinforced concrete.

445. Further repairs were necessitated by the destruction of buildings in World War II.

446. The most recent repairs were effected under the Unesco/UNDP-assisted project ETH/74/014. Major work was carried out on the Debre Berhan Selassie church, including restoration of the mural paintings, and on two buildings in the Fasil Ghebbi enclosure. During these operations valuable experience has been gained to draw upon when further restoration becomes possible and for all routine maintenance work.

RECOMMENDATIONS

(a) Roofs and floor slabs

447. Several of the reinforced concrete roofs and floors constructed some 45 years ago have been weakened due to penetration of water and consequent rusting away of the reinforcing iron rods. In some cases the new flooring has proved to be too heavy for the masonry walls, thus causing buckling of the fabric, often indicated by bulges and horizontal cracks.

448. For the consolidation of weakened old structures, the use of reinforced concrete with its specific properties may sometimes be essential (e.g. for wall plates, ring beams and supporting beams, which are cast into the structure of the masonry), but concrete floor slabs with cement screeding have an unpleasing appearance generally incompatible with historic buildings.

449. The solution adopted for restoring the floor of the small Atatami Mikael building at the north-eastern corner of Fasil Ghebbi may serve as a model. Red stone slabs were placed on wooden beams and joists, covered with a layer of lime mortar and finished by a paving of tiles, locally available.

450. The dilapidated wall of this building was consolidated by gravity grouting with liquid lime mortar, which is likewise a recommendable practice for masonry repairs.

(b) The use of lime for mortars: masonry and wall construction

451. The Gondar monuments are built of local stone, such as hard, dark grey basalt and a softer, red volcanic lava rock, with mortar and rendering materials based on lime believed to have been extracted from travertine limestone deposits somewhere in the Gondar area.

452. The original mortars used in the Debra Berhan church and the Fasil Ghebbi castles have a high lime content; analyses of small samples indicate weight percentages of lime of more than 70 per cent. On a volume basis, this means proportions of as much as 4:1 lime to other constituents such as sand and the crushed red lava, which probably came from below the palace of Cusquam. A sample taken by the consultant from the water reservoir of the Fasilides Castle has a calcium carbonate content of about 40 per cent.

453. The original use of mortar with a high proportion of lime has proved to give a strong and durable construction, whereas the later use of cement for repairs does more harm than good as cement has properties and working qualities totally incompatible with traditional construction materials.

454. An investigation into the possibilities of re-establishing the production of lime around Gondar was carried out under project ETH/74/014 (report by Neville R. Hill, Unesco, Paris 1979); and long-term tests on lime mortar are being carried out by Addis Ababa University's Building materials Test Laboratory.

455. The establishment of a viable lime industry along the lines recommended in the Hill report should have high priority in the future. It is estimated that the required expertise is readily available in Ethiopia; the Ministry of Culture only needs to arrange for co-operation with the Ministry of Mines, Energy and Water Supply, and with the Building Materials Corporation.

456. Lime, as opposed to Portland cement, can be produced with very little capital investment, especially if it is to be mainly used as a building material, and it is an appropriate small-scale industry for rural areas. Lime produced in the Gondar area could also be profitably used for painting houses (lime wash is cheap and effective) and for the local treatment of skin and hides.

Individual monuments and sites: description and recommendations

(a) Fasil Ghebbi: the Imperial City

457. The entire castle compound of the former imperial city covers about seven hectares of land surrounded by a fortification wall with a total length of about 900 metres, including 12 gateways and bridges spanning the encircling roads. Within the enclosure are six major buildings and three

churches.

458. The first building erected was the Castle of Emperor Fassilides in about 1636. The monuments built by each of his successors are arranged in almost chronological sequence from south to north.

459. The main monuments are listed below, followed by the dates of each ruler's reign:

- (i) Castle of Emperor Fassilides, 1632-1667
- (ii) Library of Tzadich Yohannes, 1667-1682
- (iii) Chancellery of Tzadich Yohannes, as above
- (iv) Castle of Emperor Yasu I, 1682-1706
- (v) Castle of Emperor David III, 1716-1721
- (vi) Castle of Emperor Bakaffa, 1721-1730
- (vii) Palace of Empress Mentuab, 1730-1755.

(a) Fasil Ghebbi: General appraisal and recommendations

460. The repair, renovation and presentation of a site on the scale of Fasil Ghebbi is a long-term, continuing programme. But when the whole project has been successfully completed, after adapting monuments for use as museums or other cultural purposes, the complex will be of very great educational and cultural benefit to local citizens and tourists alike. Furthermore, being attractively situated in the heart of the city of Gondar, the grounds can be used for a variety of recreational needs.

461. Only a fraction of the task of preserving the site and transforming the buildings for use as museums and cultural centres has so far been completed.

462. Work was initiated by the Italians in the late 1930s; and repairs were carried out on the Atatami Mikael building and the Palace of Mentuab from 1976 to 1982 under the UNDP-Unesco assisted project ETH/74/014. General plans for the future development of the site were drawn up, and more specific plans for the restoration of the Castle of Fassilides and its¹ conversion into a Regional Museum were prepared by Solomon Worede Kal¹.

463. As supplement to existing plans, the present report sets out a few general proposals and recommendations for adapting and re-using the historic structures. The execution of such plans will require a co-ordinated effort by many individuals and institutions and it will be of the utmost importance for the Ministry of Culture to appoint as soon as possible a director who can be the driving force for the successful implementation of the plans and assume responsibility for the running of Fasil Ghebbi as a Museum and Cultural Centre of Gondar.

464. An outline programme of work and estimate of costs are set out at the end of this report.

¹ Final thesis, hectographed typescript, Department of Restoration, Royal Academy of Fine Arts, School of Architecture, Copenhagen 1983.

(b) Development of a regional museum in the Castle of Fassilides

465. The purpose of this museum is to bring to life, for Ethiopian citizens and visitors alike, the Gondar period of Ethiopian history, thus placing the development of the city of Gondar in historical perspective.

466. The spirit of this period is conjured up by the building itself and the imperial compound, so dignified and steeped in history. The museum will have an important role to play in capturing the public's interest with information on the Gondar monuments - its many castles, palaces and churches - and on other material and cultural achievements of this period. The material should be presented as attractively as possible, with models, drawings and photographs to shed further light on objects on display.

467. The exhibition could be arranged in various ways, but it should illustrate the political, cultural and material history of the region.

468. One solution would be to arrange objects so as to focus attention on different themes, such as (i) historic background and architecture of castles and palaces; (ii) imperial life and customs, regalia and furniture; (iii) armour; (iv) ecclesiastic art, including icons, paintings and parchments; (v) musical instruments and the performance of music; (vi) the traditions of various ethnic groups in the area. e.g. the falasha communities of Ethiopian Jews.

469. Another solution would be to arrange material in chronological order, emphasizing the particular character of each period and the logical sequence of development. In many cases a compromise in which individual displays develop a particular theme but are independent of each other has generally proved satisfactory.

470. In any case, the assembly of museum objects, their conservation and preparation for display will take considerable time, and it is recommended that a museum curator and the requisite auxiliary staff be appointed, as early as possible so as to enable preparatory work to get under way while work is proceeding on the building itself.

(c) Temporary exhibitions and live performances

471. The Library of Tzadich Yohannes was restored by the Italians, who may have replaced or rebuilt as much as 80 per cent of the original fabric. It now houses the Branch Section of the Ministry of Culture. The first floor could still be used for offices, but this building could possibly be given other functions in the future, so as to attract more visitors and enliven the compound as a whole.

472. For instance, this building could serve as an annex to the museum in the Castle of Fassilides, which pays special attention to contemporary art and folk traditions, e.g. folk music, dancing, folk customs and so on. A permanent exhibition could remain in the castle, while the annex would be used for temporary exhibitions on particular subjects of topical interest. An added attraction could be informal live performances by musicians and theatre groups for the benefit of local inhabitants and visitors alike.

(d) Development of cottage industries in the Castle of Bakafa

473. This one-storey castle was originally built by Emperor Bakafa for banquets. Over the spacious open courtyard surrounded on three sides by the wings of the building, pieces of cloth, presumably used to be draped, as was the custom for festive occasions. This tradition could again be revived when the restoration of the structure has been successfully completed, and the whole building would be an ideal setting for the production of various handicrafts, including display and shop areas.

474. If the Ministry decides to go forward with this programme, careful planning would be needed to ensure that the proposed products satisfy market requirements in terms of quality and price.

475. Production, marketing and promotion can be handled on a co-operative basis with the assistance of the Handicrafts and Small-scale Industries Development Agency (HASIDA), or alternatively by the Ethiopian Tourist Trading Corporation (ETTC).

476. The Ethiopian Chamber of Commerce is another institution interested in the marketing of handicrafts, having recently appraised local handicraft products in various parts of the country, with professional and financial assistance from the Swedish International Development Authority (SIDA).

477. Potential external funding sources include the United Nations Development Programme (UNDP) the European Economic Community (EEC) which has an office in Paris concerned with crafts promotion, the World Crafts Council in New York, AFRO-ART in Stockholm, Sweden, the ABAL Foundation in Voorschoten, the Netherlands, or other marketing organizations in Europe and elsewhere.

478. Some of these organisations have as their principal objective the development of sales outlets for handicraft exports from Third World countries, but some also provide technical and financial assistance to producer groups.

479. All parties concerned would stand to benefit if the Ministry of Culture arranged for renovation of the buildings and made the premises available free of charge to the local handicraft co-operatives, which would then assume full responsibility for running the centre.

480. Such a workshop on museum premises should be part of a more wide-spread movement to promote cottage industries in Gondar. It would be preferable for artisans to continue working in their usual environment, and the Bakafa Arts and Crafts Centre should be only one among many possibilities of promoting local products.

(e) The future use of the Palace of Mentuab as a cultural activity centre

481. The former palace of the Empress Mentuab is the most refined structure of Fasil Ghebbi. The ground floor is now used as a public library; restoration of the upper floors has not been completed.

482. If the main entrance to Fasil Ghebbi is transferred to the north-east corner of the compound, the Palace of Mentuab will be ideally situated to accommodate a future Cultural Centre, where seminars, conferences and public meetings, as well as art performances can take place.

483. The enclosed garden in front of the palace may well be used as a pleasant out-door reading area for the library, as it can be easily controlled. Open-air performances could also take place in this sunken courtyard. The nearby outbuildings could in future be used for serving snacks, refreshments and light meals to the visitors of Fasil Ghebbi.

484. The Castle of Emperor David, the Chancellery of Tzadich Yohannes, and the Castle of Emperor Yasus should be consolidated only. These structures can be kept as historic ruins together with the many other archaeological remains to be found within the Fasil Ghebbi enclosure.

B. The Bath of Fassilides

485. This small building, set in the centre of a pool, on the outskirts of the western part of the city, deserves restoration and preservation in its own right as a historic monument.

486. The Bath of Fassilides may have been used for the religious ceremonies arranged for the still traditional annual festival of the Ephiphany and "Timgat". The walled enclosure of about half a hectare of land was used to accommodate those attending the festivals, and sports and games must also have been held here. According to Pankhurst in her book "Ethiopia, a cultural history", the bath may even have been surrounded by a still larger enclosure with garden. The so-called "Tomb of the Horse" may have formed part of this complex. It probably marked the place where the king stood when attending parades. The pool is filled with water each Timgat and still used today for this ceremonial gathering.

487. The Regional Administration has proposed that the pool should be used as a public swimming pool. This proposal is hardly compatible with the historic value of the site, nor is it feasible owing to the lack of the necessary sanitary installations.

488. The new Revolutionary Square complete with a tribune and a three-storey building, which was constructed some five years ago in the immediate vicinity of the bath, could have been designed with more consideration for the historic environment. It is to be hoped that some improvements can be made when a development plan for the whole area is prepared.

489. Judicious planting of trees could transform the site into an excellent rest and recreation area, with enough space for family gatherings, sport, games and parades, as well as the annual festivals. It would be yet more attractive if the pool were filled with water the whole year round.

C. The Cusquam church and palace ruins

490. The Cusquam compound, situated a few kilometers to the west of the town, was originally planned as private quarters for the Empress Mentuab in her later years, and was seen in full use by the traveller James Bruce in 1768-73.

491. The palace and annex buildings are now in ruins and have long been neglected, apart from basic weeding, but what remains is still a pleasant historic site and important from the architectural and technical points of view.

492. The church, which forms an integral part of the site, has no historic importance as it was reconstructed in 1953. Some careful attention, however, would improve the appearance of the building, e.g. application of a thatched roof on top of the corrugated iron plates, and re-plastering of the outer walls with lime rendering, to make the structure blend better with its surroundings.

493. This site, so close to the town, has great scenic attractions. The two aims - not incompatible - to be pursued are, therefore, to preserve it for its historic importance and to make it a favourite resort for family outings.

494. The access to these splendidly situated palace ruins and church on the slopes of the Waggara foothills should be part of a protected zone, so as to preserve the scenery and prevent intrusions in the form of public and private works¹. The planting of more shade trees would add to the pleasure of a walk to the site from the town.

Inventory of monuments and sites and measures for townscape preservation

495. In addition to the limited number of sites selected in this report for priority attention, many more monuments and sites in the Gondar area deserve attention of some kind.

496. It is therefore recommended that all historic sites be carefully listed and declared preservation areas. It would be desirable to allocate at least some funds for the repair and upkeep of the buildings on each of these sites.

497. Such measures are especially important within the Gondar township area. Before the 1974 revolution, Italian consultants completed a Masterplan which will soon have to be revised by the Ministry of Urban Development and Housing. Before then it would be advisable to identify monument zones and to prepare regulations to control future development in this area, with a view to their adoption in the new revised plans.

1 Unesco Recommendation concerning the preservation of cultural property endangered by public and private works, Paris, November 1968.

PART VIII

THE WALLED TOWN OF HARAR ¹

"Everybody likes it here because there are many historical places" (Anonymous citizen in the streets of Harar).

498. The early history of Harar is obscure since oral traditions and chronicles give different versions of its foundation.

499. The systematic penetration of Islam into this area, spurred by missionary zeal and the profits of trade, started from such centres as Zeila and Berbera (in present-day Somalia) on the Gulf of Aden. Harar was one of the most powerful strongholds of the Islamic sultanates which gradually gained control over the north-eastern and southern parts of Ethiopia.

500. Those parts of this report dealing with Lake Tana and the Gondar period have referred to the long struggle, from the 14th to the 16th century, between the central Christian highlands and the Islamic sultanates, which were entrenched all along the eastern and southern fringes of the mountain plateau. The period of maximum Islamic expansion was the mid-sixteenth century when Ahmed ibn Ibrahim, called by the Ethiopians Grañ, the lefthanded, laid waste great parts of the Christian empire. In the following three centuries, Christians and Muslims alike fell a prey to a new invader from the south, the Galla tribes who had previously inhabited a territory now in the north of Kenya. The Gallas (also known as Oromos) invaded the Harar area and settled everywhere, except in the city itself, which survived as an independent sultanate.

501. Egyptian forces succeeded in occupying Harar in 1875 and held sway until it was ultimately conquered in 1885 by Menelik II who brought Harar under Ethiopian control. The Province of Hararge was then placed under the governorship of Ras Makonnen, who in turn was succeeded as governor in 1910 by his son Ras Tafari, later to become the Emperor of Ethiopia under the name Haile Selassie.

502. Meanwhile, the building of the Suez Canal facilitated the expansion of European powers in East Africa. Its opening in 1869 enhanced the economic and political importance of Ethiopia and the entire Red Sea area. The French occupation of French Somalia, now the Republic of Djibouti, brought French influence into Harar and the region through the activities of missionaries and traders. Ethiopia for a short period fell under the domination of Italy, which occupied the whole country from 1936 to 1941.

1 Also spelt Harer and occasionally Harrar.

The process of urban development

503. The town has traditionally been a great centre of Islamic Culture and trade, and still remains the focal point of Islamic civilization in Ethiopia.

504. Its establishment was favoured by its strategic location on the eastern spur of the Ahmar Mountains, which made it a natural stopping-point on the trade routes from the coastal lowlands to the central highlands.

505. The Oromo incursion, however, weakened its commercial links with Zeila and Berbera, thus contributing to its decline from the 16th to the 18th century.

506. The victory by Menelik II and the resultant modernization of the country gave Harar a new commercial importance, more particularly as its customs charges were 8% as against 10% in Addis Ababa. As dues could be paid at either place, the result was that the bulk of the Shoa trade passed through Harar.

507. The construction of the Franco-Ethiopian railway linking Addis Ababa with Djibouti, further boosted the area's economic importance, although Harar was by-passed in favour of a new town Dire Dawa, 60 kilometers to the north. The railway was started in October 1897, completed up to Dire Dawa in December 1902, and the section into Addis Ababa was finally completed by 1917.

508. Until the early 20th century, the town grew within its 16th century ramparts, as depicted in a somewhat idealized drawing, by the European explorer Richard Burton¹, when he visited Harar in 1854.

509. The modern districts of Harar developed mainly to the west of the old town between the two world wars and under the Italian occupation. Many new buildings, including an imposing palace just outside the old town walls, were erected to house administrative services and other facilities such as a military academy, a second hospital, post office, bank, hotel and school buildings. After the 1974 revolution, new low-cost housing schemes developed to the south of the old town. Industrial development in the region began recently with the construction of a mineral water, soft drinks and beer factory, now employing 232 workers. These new developments outside the city walls have scarcely affected the basic character of the old town.

The urban fabric

510. The indigenous African traditions, overlaid in the province of Hararge by Arab and European cultural influences, have produced an exotic blend of peoples and cultures which have left their stamp on the old town, extending approximately 1500 metres from east to west and 900 metres from north to south. The total built-up area amounts to 48 hectares, while the circumference of the walls is almost 3500 metres.

¹ Richard Burton: First footsteps in East Africa. London, 1856.

511. The old town with its maze of narrow, winding alleys, seems to have grown up haphazardly. Evidence of conscious planning can be found in the main road leading from the Harar Gate to the central Faras Megalla Square. This road was cut through after the conquest of Harar by Menelik II and lined on both sides with new houses of uniform design painted with a yellow limewash.

512. The bulk of the buildings inside the walls are traditional Harari town houses with a simple, functional design. The outer walls facing the lanes are usually plain and without windows. The real character of the houses is expressed in their interior arrangement so well displayed in the small Hadare Community Museum. The white-washed walls with their decorative niches, the house utensils hanging on the walls ready for use, the plaited mats, and the rammed reddish earth flooring all combine to make delightful interior. These unpretentious houses still reflect the nomadic origins of their inhabitants who had to "travel light".

513. In recent years a few modern reinforced concrete houses have appeared inside the town walls but the townscape has generally preserved a harmonious scale and form with a pleasing use of traditional materials and colours.

Major buildings

514. The major architectural feature of the old town is the surrounding fortification walls and ramparts, which formerly were a matter of life and death. Today they still set the old town apart and imbue it with its special character. The fortifications date from the mid-16th century when, after the defeat of Grañ, the town was threatened by the Galla invasions.

515. They were rebuilt and altered several times: the Egyptians, who were deeply concerned with questions of security, repaired the walls and parapets, and constructed an entirely new fort on an isolated hill to the north-west. During the Italian occupation the western part of the walls was reconstructed and Harar Gate (Duke Gate) put up as the new main entrance into the town; reconstruction of the Buda Gate was also initiated but the work was never completed. All except the Shoa and Harar Gates have been partly demolished and are in a bad state of repair, as are the walls generally.

516. The traditional houses have one or two storeys and the original sky-line of the town is still maintained, thus leaving the minarets of the Jami Mosque as the city's most conspicuous feature.

517. The majority of citizens are Muslims who regard the town as sacred, as evidenced by the existence of about 90 mosques, holy shrines, and tombs of saints within the walls. Harar's most revered saints are Amir Nur and Umar Abādir al Bakrī.

518. The Medhane Alem (Saviour of the World) is the only Christian church in the old town. It was built after the conquest of the city by Menelik II on the site of a former mosque. Its central location on the main road makes it another major landmark. In the vicinity of the church other new buildings were erected by the governor Ras Makonnen around the turn of the century - a new palace (replaced after 1974 by a new municipal building), a community hall, a treasury building, together with residences for individual members of royal family.

519. The most prominent of these buildings are the "Dejazmach Teferi House" and the neighbouring "Jorald House". Their style reflects Turko-Egyptian influences, commonly found in towns along the Red Sea coast, and Indian features brought by Indian merchants and craftsmen. The style is broadly characterized by the extensive use of wooden panels, timber balconies, fretwork, imported polychrome glass windows, and carved doorways.

520. The market buildings with their horseshoe arches were constructed under the Italian occupation and have no particular architectural value, but they contribute to the general appeal of this colourful market.

The population of Harar

521. The total population was estimated as 30,000 in 1875, rising to 42,000 in 1885, according Ra'uf Pasha, the then Egyptian commander of Harar. This figure included 8571 persons of Egyptian or Turkish origin (3411 army personnel, 160 administrative personnel, and 5000 women and children). At that time 9650 houses and 346 huts were reported to exist within the town walls.

522. In 1983, the population for the old town was estimated as 31,735, living in 5552 houses, thus giving an average occupancy of 5.7 persons per dwelling.

523. Various tribes of Oromo (Galla) people make up the largest nationality group in the region. Most of them are now sedentary farmers using Harar as their main market town. The Harar market is famous for the vivid colours worn by the Oromo women.

524. Many other nationality groups add to the cosmopolitan atmosphere of Harar, as illustrated by the population figures for the whole Province of Harar under the Italian administration (no recent census data available): Galla 46.8%; Somali (including Danakil) 31.2%; Amhara 20.1%; and Arab 0.36% (Trimingham, p. 206).

Administration of publicly owned houses

525. All urban land and "extra" houses were nationalized in August 1975, owners being allowed to retain only one house of their choice. Harar's old town (termed Jegol for administrative purposes) has 5552 houses registered, only 1704 (or roughly 30%) of which are still privately owned. The remaining 3948 (or approximately 70%) are administered by the public sector which charges very low rents (20 to 50% less than the previous owners) in accordance with the policy of providing the widest possible range of social benefits to the people. The return is barely sufficient to cover regular needs for maintenance and repair, which are a public responsibility. Tenants themselves invest very little in maintenance as they perceive no long-term advantage in upgrading their accommodation.

526. The 3682 houses with a monthly rental of less than 100 Eth Birr are administered by local administrative bodies, known as "Kebeles", which may approve necessary repairs, thus giving tenants priority for obtaining locally available building materials. The 166 houses with a monthly rental exceeding 100 Eth. Birr are administered by the Rent Housing Agency coming under the Ministry of Housing and Urban Development, which sends workers from its main office in Dire Dawa (60 km. north of Harar) for emergency repair work, but it has no regular maintenance programme.

527. The consultant was informed that the Ministry of Housing is about to initiate a systematic survey of the state of housing in Addis Ababa, which will eventually be extended to cover the whole country. No reliable records of the state of housing in Harar are at present available, but the situation has undoubtedly reached a critical stage, calling for urgent action.

Needs for integrated development planning

528. Before the Revolution, a master plan for new town development was prepared with the assistance of an Italian consultancy firm and the report is in the Ministry of Housing and Urban Development. A new zoning plan for Greater Harar was drawn up in 1983, but it does not pay much attention to the special conditions and requirements of the old town (Jegol area).

529. There are signs of a growing awareness of the need for preservation, as exemplified by the recent decision not to demolish the "Horseshoe House" of Lidj Yassou, opposite Ras Hotel. However, the specific problems involved in preservation of the traditional townscape and improvement of housing and living conditions generally require the formulation of an "Integrated Development Plan" for the old town.

530. A house survey, based on a questionnaire, was initiated under project ETH/74/014/, with the assistance of architectural students from the Building College in Addis Ababa, but the work was left uncompleted.

531. The present report cannot cover all aspects of future development policies for the walled city, but the suggestions it puts forward and the proposed work plan may constitute a "provisional action plan" pending preparation of more comprehensive plans based on a full socio-economic survey.

532. One consequence of the events of the past ten years has been lack of routine maintenance of houses by the tenants, municipal authorities and the National Housing Agency alike. The houses of the old town are extremely vulnerable to deterioration caused by water, either in the form of rising damp or of rainwater penetrating into the wall structures. During the heavy rains of 1983, 68 houses collapsed completely, and 300 houses are now considered unsuitable for habitation, affecting about 1700 people in the old town (50 of these houses are privately owned, while 250 are under public administration).

533. At the rate of 10,000 Eth Birr per dwelling, urgent rehabilitation of traditional houses within the old town would require a total budget of 3,000,000 Eth. Birr, an amount already requested from the Ministry of Housing and Urban Development. The over-all historic importance of Harar town and the architectural merits of traditional housing would justify such rehabilitation as part of Ethiopia's cultural heritage programme, if funds can be made available for the purpose.

RECOMMENDATIONS

(a) Legal protection and administrative measures

534. If suitable arrangements can be made for co-operation with the Ministry of Housing and Urban Development, the Centre for Research and Conservation of Cultural Heritage could usefully assist in the rehabilitation of Harar by preparing a manual on the care and maintenance of traditional houses in Harar, conducting research into all aspects of conservation, and advising the local authorities on the protection and enhancement of the of the physical environment.

535. The present legislation for the safeguarding of Ethiopia's cultural heritage does not provide for "area conservation", and it was not possible to ascertain whether provision will be made in the revised legislation for protection of the overall physical environment, which is, however, an important factor to be taken into account in future plans. It would be desirable to designate the whole of the walled town and the immediate surroundings as a "conservation area", and to draw up regulations designed to give the historic area a better chance of surviving as an entity, instead of being gradually eroded in the process of development.

Maintenance and repair of old city walls and gates

536. The old city wall is the main architectural feature of the town and is responsible for the historic town's international repute. The first priority in any plan for the preservation of Harar should therefore be the repair and maintenance of the city walls, a possible second priority being the reconstruction of the now demolished parts of the gateways.

537. This task may require a team of masons for a period of five years in order to restore the structures to a satisfactory state; only routine maintenance work would then be required. The estimated cost, including contingencies, would amount to 360,350 Eth. Birr, if the stone is supplied free of charge from the quarry and local citizens of the various areas of the town are mobilized for this work.

(c) Improvement of infrastructure

538. Financial constraints rule out the installation of a sewer system complete with a treatment plant. Contamination of water from pit latrines and septic tanks should not, however, pose any serious threat, as the sources of drinking water lie well outside the town, and piped water is brought into all parts of the town.

539. The problem of draining away surface water during the rainy season may be alleviated by paving streets and lanes with locally quarried stone which has been widely used for construction purposes and as pavement in various parts of the town. Not only would improved pavements greatly reduce dampness in walls during the rainy season, but it would also help upgrade the areas and facilitate street cleaning.

540. It is estimated that most of the work could be completed in five years by a team of masons at a total cost, including contingencies, of 360,350 Eth Birr, provided that the stone is supplied free of charge from the quarry.

541. The services of an international consultant in sanitary engineering would be needed to assist in drawing up plans for storm-water drainage and to plan the construction of public toilets and septic tanks for renovating the central market buildings. Including contingencies the estimated cost of renovation, construction work and improvement of market facilities would amount to 250,000 Eth. Birr.

Development of museums

542. Harar now has two museums:

- (i) one small community museum financed and arranged out of sheer interest and with voluntary assistance by a small group of local citizens. It is an extremely fine museum, which in a simple way displays a traditional Harar town house, fully equipped with domestic utensils, and various crafts practised in the town. This type of museum can be recommended warmly as a model for local museums in other parts of the country; and it demonstrates admirably how little investment is needed to document and put features of the cultural heritage on display.
- (ii) The Regional Museum under the Ministry of Culture is housed in one room of approximately 100 square metres, located in the municipal building. The exhibition is kept orderly, although a more systematic arrangement would be desirable, and better explanatory notices are needed. It focuses mainly on ethnographic material from the region. The small temporary "war museum" depicting the recent border conflict with Somalia is well worth continuing, as it is a good example of how the museum can play a part in contemporary life and events.

543. The Regional Museum's last quarterly report states that 1950 Ethiopian and 320 foreign visitors came to the exhibition during that period, making an average of 25 visitors a day. This surely indicates the success of the "Know your country" programme initiated by the Ethiopian Tourist Commission, and can only encourage further development of museum activities.

544. The museum is in immediate need of funds for purchasing additional equipment and materials. The Hararge Regional State Prison Administration has agreed to make new showcases if supplied with the necessary materials. There is an obvious need for better visual presentation of the exhibits and photographs and tape recordings to document the museum objects. These modest

initial expenditures may cost 10,000 Eth. Birr. and have been requested from the Ministry of Culture.

545. Eventually it would be desirable to have a larger museum with adequate storage space.

Restoration of "Jorald House" for use as a future museum

546. One important aspect of up-grading and preserving the old town is the repair and maintenance of the important buildings with historic associations. Ethiopia has limited resources to spend on preservation of historic structures, and it is recommended that these buildings be put to public use, so as to earn income and pay for their maintenance.

547. One such building may be the "Jorald House", commonly associated with the French poet Arthur Rimbaud. It was actually erected in 1908, well after the departure and death of Rimbaud in 1891. But the general belief that the house was his residence for part of his life in Harar has persisted and may stir some international interest in the preservation of the building which would appeal particularly to French visitors.

548. The building is an important landmark in the town and a unique example of an architectural style which flourished in Harar around the turn of the century.

549. Several plans have been put forward by the French:

- (i) Contacts were established in the early 1970s between the Municipality of Harar and the town of Charleville in France (Rimbaud's birth-place, with a library on the poet) with the aim of restoring the building for use as a French Cultural Institute.
- (ii) Another possibility explored is the establishment of a Franco-Ethiopian Cultural Centre for Young People. Plans prepared in 1976 estimated the cost at 100,821 Eth. Birr, to which should be added 123,000 for equipment and supplies. The proposal included (a) a library, (b) exhibitions on local handicrafts, everyday life, etc., (c) conference facilities and living quarters for short-term visitors, (d) research library on pre-history, megalithic monuments and rock paintings in the region.

The project may be viable after revision. The original proposals may be consulted in the Cultural and Technical Cooperation Section of the French Embassy in Addis Ababa.

550. Since more suitable premises are now needed for the Regional Museum located in the Municipal building, "Jorald House" could possibly be restored for future use as a regional museum.

551. The museum should still focus mainly on ethnographic material from the region, much of which is disappearing so rapidly that full documentation on this subject may soon be no longer available. Various sections should deal with

individual nationality groups, all tribes being represented so as to document all aspects of their development (with special attention to agriculture). One small unit could possibly illustrate the history of Ethiopia's relations with other countries which intervened in the region.

552. The current cost of restoring the building and having it fully equipped may amount to 625,000 Eth. Birr. including contingencies. In the process of developing new museum premises, the possibility of using neighbouring buildings may also be considered. The close-knit urban fabric with alleys and inter-connected courtyards would make it possible to use neighbouring buildings either as museum premises or for workshops.

Training of museum staff

553. The long-term need for professional staff to run the museum is obvious. It is therefore recommended that provision be made for one regional fellowship in museology for one year, and one international fellowship in ethnography/anthropology for two years. In addition, two international consultants should be requested (one museum adviser and one expert in ethnographic research and collection). In both cases it would be desirable to recruit the international consultants from the same University Institute which is training the Ethiopian nationals.

Small-scale industries and handicrafts

554. A sound economic base is needed to finance not only the repair of Harar's historic buildings but also their future maintenance. The economic resources of Harar could be augmented by both tourism and small-scale industries. Wise management of these two areas could greatly contribute to the preservation of the cultural heritage.

RECOMMENDATIONS

555. Harar has the largest commodity market in the area, but faces increasingly strong competition from the Dire Dawa Afeteissa Market, richly stocked with cheap imported products of generally low quality. A deliberate effort will be needed to stem this flood of imported commodities via Djibouti, and to offer a better choice of high-quality local products at competitive prices. The Ministry of Culture could actively assist such a development in various ways.

556. One way would be to establish active co-operation with the Handicrafts and Small-Scale Industries Development Agency (HASIDA) and promote the establishment of a training centre and various workshops in the town. HASIDA's office for the Eastern region is located in Dire Dawa. It would be advisable to establish at least a local branch office in Harar.

557. The main sectors recommended for expansion are clothing, manufacturing and handicrafts production. Since the Harar region depends mainly on traditional farming and animal husbandry, the production and improvement of agricultural implements would be an obvious area on which to concentrate. Then, again, in view of the well established craft tradition of the region's population, such skills as weaving, tailoring, basketry, pottery and silver-smith's work could be given a new lease of life. These crafts could still be practised on a small scale if the producers organize themselves in co-operatives with the help of HASIDA: in fact it is preferable for them to continue working in their habitual environment, or under similar conditions. Social conditions in the old town might favour the formation of guilds or similar associations of craftsmen, which could help in promoting and improving the products, for instance by awarding annual prizes and arranging temporary exhibitions of local crafts. Demonstration workshops, perhaps on museum premises, should be set up for training purposes and to serve as a general inspiration.

558. An arts and crafts centre, with a specific tourist appeal, could be housed in the "Dejazmach Teferi House" after its restoration. This house was built in 1910 A.D./1903 Eth. Cal., as a residence for Teferi Makonnen, the late Emperor Haile Selassie, when he was appointed Governor of the Hararge Province. Along with several other Harar buildings dating from the turn of the century, its architecture reflects various foreign influences. Indian and Turkish models can be traced in such architectural details as the extensive use of wooden panels, polychrome glass windows, decorative fretwork, cantilivered wooden balconies, and the richly carved entrance door.

559. Apart from its architectural interest, this building is worth preserving as it is one of Harar's main landmarks, well situated in the heart of the old town, commanding a fine view to the south over the town's rooftops to the country beyond. The municipal authorities recently made some repairs to the building, with the intention of using the ground floor for a youth club, the first floor for offices, and the outbuildings for housing.

560. The building's historic importance would justify its use for a more "public" function and its inclusion in a tour of Harar's special sites and buildings. It could possibly be used in future for a handicrafts centre and changing exhibitions of traditional crafts and techniques. If the Ministry of Culture were to arrange for its full restoration, the building could perhaps be placed at the disposal of one of the town associations, which would be responsible for the centre's operation under a special agreement with the Ministry and the Municipality. The estimated cost of restoration is Eth. Birr. 130,000 while furnishings and equipment may amount to 60,000 Birr, depending on the specific nature of the centre, which needs to be the subject of a detailed study. Including contingencies the total cost may be estimated at Eth. Birr 237,500.

561. In Harar, probably to a greater extent than in other historic areas dealt with in the present report, the preservation of the cultural heritage is not only a matter of restoring individual buildings, but must be associated with efforts to upgrade living conditions and to revitalize economic life. Apart from the encouragement of handicrafts, the Government may wish to institute surveys into various social problems (e.g. the abusive chewing of Khat (*Catha edulis*)).

ANNEX I: ITINERARY AND SCHEDULE OF FIELD VISITS DURING MISSION:

Monday, 19 March - Wednesday, 21 March: Departure Copenhagen for briefing by Unesco and ICOMOS in Paris.

Saturday, 31 March - Friday, 6 April: Field visit to the Old Centre of Harar by car (Addis Ababa - Harar - Addis Ababa).

Tuesday, 10 April: Field visit to Melka Konture archaeological site, Tiya Stelae site and Biet Adadi Maryam rock-hewn church by car.

Monday, 16 April - Saturday, 21 April: Field visit to Lake Tana and Gondar

Monday: Addis Ababa to Bahar Dar by air, visit to:

- Kebran Gabriel church and monastery
- Debra Mariam church

Tuesday: - Narga Selassie church and monastery
- Daga Istaphanos church and monastery
- Ure Kidane Meret church, Zegie

Wednesday: - Tana Cherkos church and monastery
- Rema Medhane Alem church and monastery

Thursday: Bahar Dar to Gondar by car:
- Debra Sinai church, Gorgora
- Qusquam Castle ruins
- Debra Berhan Selassie church, Gondar

Friday: - Fasil Ghebbi castles and compound
- The Bath of Fassilides

Saturday: Gondar to Addis Ababa by air.

Wednesday, 25 April - Sunday, 29 April: Field visit to Lalibela and Aksum:

Wednesday: Addis Ababa to Lalibela by air, visit to:

- Biet Medhane Alem
- Biet Maryam
- Biet Mikael (Debra Sinai church)
- Biet Golgota
- Biet Selassie

Thursday: - Biet Amanuel
- Biet Mercoreos
- Biet Libanos
- Biet Gabriel and Biet Rafael
- Biet Georghis

Friday: Lalibela to Aksum by air, visit to:
- The commemorative stone of King Azana
- Bazaen Tomb
- St. Mary Cathedral and treasure
- The archaeological museum building
- The stelae field

Saturday: - Kaleb Palace ruins
- Dongur Palace ruins
- The "Gudit" Stelae field

Sunday: Aksum to Addis Ababa via Asmara by air.

Wednesday, 19 May: Departure from Addis Ababa for Copenhagen, end of mission.

ANNEX II : LIST OF PERSONS CONSULTED DURING THE MISSION

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Mr. Giram Yilma, Minister of Culture
Mr. Tadessa Terfa, Head, Centre for Research and Conservation of Cultural Heritage (CRCCH)
Mr. Solomon Worede Kal, Head, Project Section, CRCCH
Mr. Mesfin Tsegaw, Head, Inventory and Inspection Section, CRCCH
Mr. Yigzaw Seyoum, Head, Common Technical Service Section, CRCCH
Mr. Kebede Bokale, Head of the Photographic Section, CRCCH
Mr. Fikredingel Beyene, Manager, Manuscripts Department
Mr. Yihun Belai, General Manager, Film Centre
Mr. Mamo Tessema, Manager, National Museum
Mr. Sherif Abdurahman, Head, Addis Ababa Fine Arts School
Mr. Admasu Wolde Selassie, Manager, Harar Branch Office
Mr. Asheber Adrianos, Officer of Cultural Heritage Preservation, Harar
Mr. Yewond Wossen Tefferi, Manager, Gojam Branch Office, Bahar Dar
Mr. Delegn Awoke, Manager, Gondar Branch Office, Gondar
Mr. Addis Remeha, Officer of Cultural Heritage Preservation, Gondar
Mr. Demessie Wolde Hanna, Manager, Lalibela Branch Office
Mr. Tekeste Brahan Gebrekidan, Manager, Aksum Branch Office
Mr. Legesse Worku, Former Manager, Harar Branch Office
Mr. Francis Anfray, Archaeologist, French Archaeological Mission.

United Nations Development Programme (UNDP)

Dr. K.F.S. King, Resident Representative, UNDP
Mr. Jean-Pierre Gernay, Deputy Resident Representative, UNDP

United Nations Educational, Scientific and Cultural Organization (Unesco)

Mr. Awad Idris, Representative to Ethiopia and Liaison Officer with ECA and OAU.

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Mrs. Delphine Lapeyre, Director, ICOMOS.

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Mr. Debebe Tegegne, Secretary-General

Ethiopian Permanent Delegation to Unesco

Mr. Legesse Negewo, Permanent Delegate

Ethiopian Tourism Commission

Mr. Teferra Shiawl, Head, Tourism Promotion Department

Miss Almaz Haile Selassie, Statistics and Planning Department

Handicrafts and Small-Scale Industries Development Agency (HASIDA)

Mr. Gelgelo Doyo, Manager, HASIDA

Mr. Siyum Zelelew, UNDP/UNIDO Project Ass. Administrator, HASIDA

Mr. Tassew Kassahun, Technology expert, HASIDA

Municipality and Infrastructure Administration

Mr. Amare Belay, Chief, Town Planning Department, Ministry of Housing and
Urban Development

Mr. Hailu Bebre, Mayor of Harar

Mr. Kassahun Tadesse, Deputy Mayor of Harar

Mr. Kassa Worese, Head, Regional Office, Harar, Ministry of Housing and Urban
development

Mr. Bekele Tasew, Head, Government House Rental Agency, Dire Dawa.

ANNEX III : LIST OF REPORTS PREPARED FOR THE GOVERNMENT OF ETHIOPIA BY THE UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (Unesco)

- 1) - Recommendations for the organization of the Ethiopian Antiquities Administration, by R. H. Howland, 1967 - Serial No. 89/BMS.RD/SHC
- 2) - Proposals for the Development of Sites and Monuments in Ethiopia as a contribution to the growth of cultural tourism, by S. Angelini and L. Mongin, June 1968 - Serial No. 893/BMS.RD/CLT
- 3) - Cultural Tourism : Prospects for its development, by B.G. Gaidoni, October 1969 - Serial No. 2031/BMS.RD/CLT
- 4) - The Historic Route : A work-plan for the development of the sites and monuments, by S. Angelini, June 1971 - Serial No. 2468/RMO.RD/CLT
- 5) - Preservation and restoration of sites and monuments along the Historic Route, by G.S. Burrows, November 1974 - Serial No. 3145/RMO.RD/CLP
- 6) - Regional Centre for Conservation of Cultural Property, by H. J. Plenderleith and L. J. Rollet Andriane, November 1974 - Serial No. 3190/RMO.RD/CLP
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14. Recommendation for the Safeguarding and Preservation of Moving Images (General Conference, Belgrade, 27 October 1980).

¹ Ratified by Ethiopia on 6 July 1977.

ANNEX VI: THE VENICE CHARTER

INTERNATIONAL CHARTER FOR THE CONSERVATION AND RESTORATION
OF MONUMENTS AND SITES

Imbued with a message from the past, the historic monuments of generations of people remain to the present day as living witnesses of their age-old traditions. People are becoming more and more conscious of the unity of human values and regard ancient monuments as a common heritage. The common responsibility to safeguard them for future generations is recognized. It is our duty to hand them on in the full richness of their authenticity.

It is essential that the principles guiding the preservation and restoration of ancient buildings should be agreed and be laid down on an international basis, with each country being responsible for applying the plan within the framework of its own culture and traditions.

By defining these basic principles for the first time, the Athens Charter of 1931 contributed towards the development of an extensive international movement which has assumed concrete form in national documents, in the work of ICOM⁽¹⁾ and Unesco⁽²⁾ and the establishment by the latter of the International Centre for the Study of the Preservation and the Restoration of Cultural Property. Increasing awareness and critical study have been brought to bear on problems which have continually become more complex and varied; now the time has come to examine the Charter afresh in order to make a thorough study of the principles involved and to enlarge its scope in a new document.

Accordingly, the IInd International Congress of Architects and Technicians of Historic Monuments, which met in Venice from May 25th to 31st 1964, approved the following text:

DEFINITIONS

ARTICLE 1.

The concept of an historic monument embraces not only the single architectural work but also the urban or rural setting in which is found the evidence of a particular civilisation, a significant development or an historic event. This applies not only to great works of art but also to more modest works of the past which have acquired cultural significance with the passing of time.

ARTICLE 2.

The conservation and restoration of monuments must have recourse

(1) International Council of Museums

(2) United Nations Educational, Scientific and Cultural Organization

to all the sciences and techniques which can contribute to the study and safeguarding of the architectural heritage.

AIM

ARTICLE 3.

The intention in conserving and restoring monuments is to safeguard them no less as works of art than as historical evidence.

CONSERVATION

ARTICLE 4.

It is essential to the conservation of monuments that they be maintained on a permanent basis.

ARTICLE 5.

The conservation of monuments is always facilitated by making use of them for some socially useful purpose. Such use is therefore desirable but it must not change the lay-out or decoration of the building. It is within these limits only that modifications demanded by a change of function should be envisaged and may be permitted.

ARTICLE 6.

The conservation of a monument implies preserving a setting which is not out of scale. Wherever the traditional setting exists, it must be kept. No new construction, demolition or modification which would alter the relations of mass and colour must be allowed.

ARTICLE 7.

A monument is inseparable from the history to which it bears witness and from the setting in which it occurs. The moving of all or part of a monument cannot be allowed except where the safeguarding of that monument demands it or where it is justified by national or international interests of paramount importance.

ARTICLE 8.

Items of sculpture, painting or decoration which form an integral part of a monument may only be removed from it if this is the sole means of ensuring their preservation.

RESTORATION

ARTICLE 9.

The process of restoration is a highly specialised operation. Its aim is to preserve and reveal the aesthetic and historic value of the monument and is based on respect for original material and authentic documents. It must stop at the point where conjecture begins, and in this case moreover any extra work which is indispensable must be distinct from the architectural composition and must bear a contemporary stamp. The restoration in any case must be preceded and followed by an archaeological and historical study of the monument.

ARTICLE 10.

Where traditional techniques prove inadequate, the consolidation of a monument can be achieved by the use of any modern technique for conservation and construction, the efficacy of which has been shown by scientific data and proved by experience.

ARTICLE 11.

The valid contributions of all periods to the building of a monument must be respected, since unity of style is not the aim of a restoration. When a building includes the superimposed work of different periods, the revealing of the underlying state can only be justified in exceptional circumstances and when what is removed is of little interest and the material which is brought to light is of great historical, archaeological or aesthetic value, and its state of preservation good enough to justify the action. Evaluation of the importance of the elements involved and the decision as to what may be destroyed cannot rest solely on the individual in charge of the work.

ARTICLE 12.

Replacement of missing parts must integrate harmoniously with the whole, but at the same time must be distinguishable from the original so that restoration does not falsify the artistic or historic evidence.

ARTICLE 13.

Additions cannot be allowed except in so far as they do not detract from the interesting parts of the building, its traditional setting, the balance of its composition and its relation with its surroundings.

HISTORIC SITES

ARTICLE 14.

The sites of monuments must be the object of special care in order to safeguard their integrity and ensure that they are cleared

and presented in a seemly manner. The work of conservation and restoration carried out in such places should be inspired by the principles set forth in the foregoing articles.

EXCAVATIONS

ARTICLE 15.

Excavations should be carried out in accordance with scientific standards and the recommendation defining international principles to be applied in the case of archaeological excavation adopted by Unesco in 1956.

Ruins must be maintained and measures necessary for the permanent conservation and protection of architectural features and of objects discovered must be taken. Furthermore, every means must be taken to facilitate the understanding of the monument and to reveal it without ever distorting its meaning.

All reconstruction work should however be ruled out a priority. Only anastylosis, that is to say, the reassembling of existing but dismembered parts can be permitted. The material used for integration should always be recognisable and its use should be the least that will ensure the conservation of a monument and the reinstatement of its form.

PUBLICATION

ARTICLE 16.

In all works of preservation, restoration or excavation, there should always be precise documentation in the form of analytical and critical reports, illustrated with drawings and photographs.

Every stage of the work of clearing, consolidation, rearrangement and integration, as well as technical and formal features identified during the course of the work, should be included. This record should be placed in the archives of a public institution and made available to research workers. It is recommended that the report should be published.

ANNEX VII: SYMPOSIUM ON STONE CONSERVATION ORGANIZED BY THE INTERNATIONAL CENTRE FOR CONSERVATION AND RESTORATION OF MONUMENTS IN LALIBELA, ETHIOPIA FROM 5 TO 12 APRIL 1978

1. CONCLUSIONS: Summary of Conclusions and Resolutions adopted

Geology

The principal cause of the deterioration of the monument is an impermeable basalt horizon which prevents through-flow of water and thus encourages cycles of crystallization of salts already present in the scoria.

The main regional trend is North-South with subsidiary East-West components present in the Lalibela area. These have set up at least two major joint systems, with a third system being induced by geostatic release. Thermal differential expansion of components within the scoria have also created stress fields capable of dis-integrating these components.

Salts

The natural rock contains a relatively large percentage of salts. The altered zones all show the presence of salts. This presence of salts is not limited to the monuments, but continues in the native rock. If the salts prove by analysis to be soluble their provenance would derive from the rock itself and they would be transported to the altered areas by humidity of infiltration or capillarity. Proximity to a current of air would encourage evaporation and the formation of salts.

Whatever the details of the processes for the formation of salts, the rock seems to be extremely vulnerable to humidity in any form. Therefore, the essential problem is to research fully the sources of humidity and, to the extent possible, control and eliminate them.

Biology

Microbiological lichens and mosses are the dominant vegetation growing on the monuments. The lichens grow well in both wet and dry areas. The mosses inhabit predominantly the wet areas. The mosses appear to do the most harm (to be confirmed by analysis). The damage by lichens is not appreciable, though it cannot be discounted.

The growth of vegetation on the monuments is undesirable. The main cause of the growth of vegetation is undoubtedly the water that accumulates due to rain and by capillary action, as the rock is very porous.

2. Resolutions Adopted by the Members of the Symposium:

- "1) The programme of maintenance should be continued and given a very high priority.
- 2) Based on the results of the initial investigations a programme of testing conservation material should be carried out in situ to select the best material and techniques for future conservation interventions in collaboration with competent laboratories.
- 3) When the needs of the monuments and the best materials and techniques of conservation have been elucidated and agreed upon, the necessary conservation work should proceed without undue delay.
- 4) All future interventions should be scientifically and thoroughly documented.
- 5) Since all outside assistance is of a temporary nature, the ultimate preservation of the monuments depends upon the formation of capable, concerned, trained Ethiopians who will continuously attend to the preservation needs of their cultural heritage. Therefore, the need to begin to train such individuals cannot be stressed too strongly. Screening of potential future specialists in conservation should be undertaken as soon as possible by the Ethiopian authorities so that programmes of training can be arranged in the near future."

ANNEX VIII: LIST OF PERSONNEL WITH CRCCH (present situation):

(a) Project Section

No. of posts	Title of post and educational background
1	Section Head, architect-restorer (Building College graduate plus 3 years' training in Denmark).
1	Administrator.
1	Building Surveyor (trained in photogrammetry survey techniques).
1	Architect-restorer (Building College graduate, plus 7 months' training in Italy).
3	Architects (Building College graduates).
3	Building Engineers (Building College graduates)
3	Historians (Addis Ababa University).
2	Painting Restorers (Art School graduates, one with three years' additional training in Denmark, one with 4 months' training at ICCROM).
2	Assistant Painting Restorers (Art School graduates).
<hr/>	
17	Total number of professional employees (one object restorer receiving further training abroad).

(b) Museums Division

1	Head of Division (ceramist plus education abroad).
2	Archaeologists (Addis Ababa University plus training abroad).
3	Painting Restorers (Fine Arts School plus short-term training abroad).
1	Sculptor (Fine Arts School plus short-term training abroad).
1	Art historian (Addis Ababa University).
<hr/>	
9	Total number of professional employees.

No. of posts	Title of post and educational background
(c) <u>Common Technical Services Division</u>	
1	Head of Division
1	Ass. Head of Division
1	Photographic Section Head (Photographer plus training abroad).
2	Photographers
2	Photographic technicians
7	Total number of professional employees.
(d) <u>Inventory and Inspection Division</u>	
1	Division Head (linguist, Addis Ababa University).
1	Sociologist (Addis Ababa University).
2	Historians (Addis Ababa University).
7	Inventory Staff (High School Graduates)
11	Total number of professional employees (3 staff members abroad for further training)
(e) <u>Archaeology Division</u>	
1	Division Head, archaeologist
1	Archaeologist
1	Cultural anthropologist
3	Total number of professional employees
(f) <u>Total number of employees of CRCCH including auxiliary staff</u>	
No. of staff	Division
22	Project Section
30	Museums Division
24	Common Technical Services Division
11	Inventory and Inspection Division
25	Archaeology Division
112	Total number of staff

ANNEX IX: ESTIMATION OF WAGES FOR BUILDING REPAIRS

Explanatory notes:

(i) All cost estimates are quoted in Ethiopian Birr at 1984 prices. The current exchange rate is 1 US Dollar \approx 2.05 Eth. Birr. Price inflation over the ⁽¹⁾life of the project is assumed to be in the range of 10 per cent annually.

(ii) The estimated budget is prepared on basis of a tentative survey, and since the restoration of ancient buildings often runs into unforeseen problems contingencies amounting to 25% have therefore been added.

(iii) Salaries for project administrative staff, allowances, transport, and office and administrative costs are not included in the estimates.

(iv) Each job-site includes individual structures or groups of structures, which are conveniently treated in one operation by a single team. Due to difficult access and working conditions during the rainy season, the actual period of field work lasts for ten months, from September to June. For each job-site it was estimated how long it would take one team to complete the scheduled work with current wage rates as follows:

Team of Carpenters / 10 months of field work:

1 carpenter	(20 Birr a day)	6,000,
2 assistant carpenters	(15 " " ")	9,000,
2 unskilled workers	(5 " " ")	3,000,
Total Eth. Birr		<u>18,000,</u>

Team of Masons / 10 months of field work:

1 master mason	(20 Birr a day)	6,000,
2 assistant masons	(15 " " ")	9,000,
6 unskilled workers	(5 " " ")	9,000,
1 site supervisor	(15 " " ")	4,500
Total Eth. Birr		<u>28,500,</u>

Daily labour force for removal of debris, cleaning up sites, etc. is hired as the needs arise at a daily wage of 5 Eth. Birr a day.

ANNEX X: SUMMARY OF TOTAL ESTIMATED COST OF BUILDING REPAIRS AND DEVELOPMENT OF REGIONAL MUSEUMS

Notes: Total estimated costs are taken from the appropriate breakdown for each area of activity (See Annex X- A. to F.)

All costs in Eth. Birr, 1984 prices (US\$ = 2.05 ETH Birr).

Aksum	2,547,500,-
Lalibela (1)	6,629,375,-
Lake Tana	2,619,125,-
Gondar	3,812,175,-
Harar (2)	5,575,000,-
Tiya	16,875,-
<hr/>	
Grand Total Eth. Birr	21,200,050,-

(1) Including development of handicrafts and small-scale industrial Development estimated at 1,000,000 subject to separate detailed study.

(2) Integrated town development plan needed.

ANNEX X - A ARCHAEOLOGICAL SITES OF AKSUM: OUTLINE PROGRAMME OF
WORK AND SUMMARY OF COSTS.

The work programme for Aksum is subject to modification since it is difficult to predict the results of future excavations.

Archaeological work to be undertaken gradually, possibly in co-operation with foreign university institutions, involving in-service training of Ethiopian archaeologists, conservation of finds, cataloguing and arrangement of museum collections.

Zoning regulations and formulation of by-laws regulating future town development to be worked out in co-operation with the Ministry of Housing and Urban Development.

		<u>Ethiopian Birr</u>
1.	<u>The northern stelae field:</u>	
	- creation of an extended archaeological site; safe arrangements to move fallen stelae; elimination of round-about, fish pond and the present axial lay-out of the "Stelae Park"; re-shaping of natural slope in connection with archaeological diggings; tree-planting in the area adjoining the St. Mary of Zion Cathedral and arrangement of pedestrian precinct and public amenity area.	
	- payment of compensation and arrangement for resettlement of app. 50 households, average 10,000 Birr (1)	500,000
	- two teams of masons (1) task forces for two years	57,000
	- 50 unskilled workers for two years	150,000
	- transport and equipment	<u>100,000</u>
		807,000
	- contingencies 25 per cent	<u>201,750</u>
	total estimated cost in Eth. Birr	<u>1,008,750 1,008,750.-</u>
2.	<u>Dongur Palace ruins:</u>	
	- consolidation and maintenance of wall structures, improvement of drainage; erection of shelter above brick oven (1)	10,000
	- one team of masons (1) for one year	<u>28,500</u>
		38,500
	- contingencies 25 per cent	<u>9,625</u>
	- total estimate cost in Eth Birr	<u>48,125 48,125.-</u>

(1) For composition of a team, see Annex IX

3.	<u>Gudit Stelae field:</u>	<u>Ethiopian Birr</u>
	- compensation to farmers for use of land	3,000
	- landscaping, stabilization and re-erection of some stelae	3,000
	- contingencies 25 per cent	<u>1,500</u>
	- total estimated cost in Eth. Birr	<u>7,500</u> <u>7,500</u>
4.	<u>Tomb of King Kaleb and Gabra Maskal</u>	
	- consolidation of wall structures; preventive maintenance; improvement of site drainage; erection of permanent shelter above burial chambers	40,000
	- one masonry task force for one year	28,500
	- one carpentry task force for one year	<u>18,000</u>
		86,500
	contingencies 25 per cent	<u>21,625</u>
	- total estimated cost in Eth. Birr	<u>108,125</u> <u>108,125</u>
5.	<u>Construction of museum premises</u>	
	- extension of existing archaeological museum to provide new exhibition area, public amenities, offices for administrative staff and storage space. Estimated need of total 1000m ² at construction costs of 1,000 Eth. Birr/m ²	1,000,000
	- furniture and equipment	<u>100,000</u>
		1,100,000
	- contingencies 25 per cent	<u>275,000</u>
	- total estimated cost in Eth. Birr	<u>1,375,000</u> <u>1,375,000</u>
	Grand total estimated cost, Eth. Birr:	<u>2,547,500</u>
6.	<u>International consultants</u>	
	- archaeologist 2x6 man/months)	
	- architect-restorer 2x3 man/months) for costing refer to	
	- structural engineer 2x2 weeks) Annex XII	
	- museum adviser 2x3 man/months)	
7.	<u>International fellowships</u>	
	- one international fellowship in museology)	
	for two years)	
	- three international fellowships in)for costing refer to	
	archaeology for two years) Annex XII	
	- one international fellowship in conservation)	
	for two years)	

ANNEX X - B

5.9 ROCK-HEWN CHURCHES AT LALIBELA: OUTLINE OF WORK PROGRAMME AND SUMMARY OF COSTS:

Continuation of preventive maintenance of all churches and surroundings; completion of photogrammetric survey; preparation of detailed survey drawings and continuation of static control measures and meteorological records; preparation of topographical survey of the village, town development plans, zoning regulations and by-laws in co-operation with the Ministry of Housing and Urban Development.

1.	<u>Restoration of Biet Emanuel</u> (subject to detailed studies after completion of survey drawings and static investigations)		<u>Ethiopian Birr</u>
	- one team of masons for two years	57,000,-	
	- one team of carpenters for two years	36,000,-	
	- transport and materials	50,000,-	
		<u>143,000,-</u>	
	- contingencies 25 per cent	35,750,-	
	- Total estimated cost	<u>188,750,-</u>	188,750,-
2.	<u>Restoration of Biet Abba Libanos</u> (Subject to detailed studies after completion of survey drawings and static investigations).		
	- one team of masons for one year	28,500,-	
	- one team of carpenters for one year	18,000,-	
	- transport and materials	25,000,-	
		<u>71,500,-</u>	
	- contingencies 25 per cent	17,875,-	
	- Total estimated cost	<u>89,375,-</u>	89,375,-
3.	<u>Reconstitution of surrounding trenches and ditches in combination with archaeological excavations</u> (subject to completion of topographical map).		
	- payment of compensation to approximately 134 households each 6,000 Eth. Birr for resettlement	804,000,-	
	- provision of new infrastructure (electricity, water, etc.) for resettlement by municipality	1,000,000,-	
	- 200 day-labourers for three years	900,000,-	
	- 3 foremen for three years	54,000,-	
	- 1 blacksmith and two assistants	45,000,-	
	- 1 carpenter and 2 assistants	45,000,-	
	- 1 mason and 2 assistants	<u>45,000,-</u>	
		<u>2,893,000,-</u>	

Ethiopian Birr

- transport	2,893,000	
- materials and equipment: 200 wheel barrows/ 300 Birr; 400 pigs/10 Birr; 400 shovels/ 10 Birr; 2 complete set of pulleys/ 10.000 Birr: total	<u>88,000</u> 2,981,000	
- contingencies 25 per cent	<u>745,250</u>	
- Total estimated cost	3,726,250	3,726,250
4. <u>Upgrading of vernacular housing: cost of subsidies to some 1,000 households for purchase of traditional building materials and provision of technical assistance</u>		
- each household average 500 Birr	500,000	
- contingencies 25 per cent	<u>125,000</u>	
- Total estimated cost	625,000	625,000
5. <u>Re-siting of access road (subject to approved town plan and co-operation with Regional Road Construction Authority)</u>		
- Total estimated cost		1,000,000
6. <u>Development of handicrafts and small-scale industries (a special study would be required to estimate the cost of this project which would be carried out in co-operation with HASIDA)</u>		
Grand total estimate cost in Ethiopian Birr:		<u>5,629,375</u>
7. <u>International consultants</u>		
- archaeologist, 2x3 months)	
- architect restorer 3x3 months)	for costing refer
- structural engineers 2x2 weeks)	to Annex XII
- stone conservation specialist 2x2 weeks)	
8. <u>International fellowships:</u>		
- one international fellowship in archaeology for two years)	for costing refer
- one fellowship for stone conservation course in Venice, Italy, for 3 months)	to Annex XII

6.11 CHURCHES AND MONASTERIES AT LAKE TANA : GENERAL DEFECTS AND RECOMMENDATIONS FOR REPAIR, INCLUDING SUMMARY OF COSTS

This summary lists some typical defects found in six of the Lake Tana church buildings and monasteries, together with general recommendations on the restoration of the buildings and a summary of costs. The estimate of costs is tentative since it is based on a very short visit to the site. Equipment for restoring paintings is provisionally costed in Annex XI (f).

1.	<u>Kebran Gabriel Church and monastery:</u>	(approximately 530m ² floor area).		
ITEM	PRESENT CONDITION	REPAIR RECOMMENDATIONS	ESTIMATED COST	TOTAL COST
Roof	corrugated iron sheeting on top of purlin and rafter construction	to be replaced by traditional thatch: 240 m ³ /200 Birr	48,000	
Pillars	dressed stone with moulded imposts, rendered with rough-cast cement chips	cement plaster to be stripped off dressed masonry to be 1 ft blank		
Walls	Lime plaster patched with cement	to be repaired with lime plaster only		
Floor		to be covered with bamboo matting 530m ² / 10 Birr	5,300	
Enclosure walls, gateways, and treasure building:		general repair		
Wood-work	beetle attack (Tinziza)	elimination of insect pests and treatment with wood preservatives	5,000	
Materials		2 truckloads of lime, red earth and sand	10,000	
Labour		one team of thatchers ⁽¹⁾ /one year	15,000	
		one team of masons ⁽¹⁾ /one year	28,500	
		one carpenter/one year	18,000	
			<u>129,800</u>	
Estimated cost including 25% for contingencies	25 per cent		<u>32,450</u>	<u>162,250</u>

(1) for composition of team, see Annex IX

Transport

162,250,00

2. Ura Kidane Mehret Church, Zegie : (approximately 700m² floor area)

ITEM	PRESENT CONDITION	REPAIR RECOMMENDATIONS	ESTIMATED COST	TOTAL COST
Roof	thatch	to be renewed: 320m ³ /200 Birr	64,000	
Timber posts	1/5 of posts out of plumb, indicating structural failures	structural repair	5,000	
Walls	masonry sound and newly plastered with "chika"	walls of Maqdas to be repaired, renewal of backing material for murals		
Floor	excellent bamboo matting			
Wood work	termites and woodboring insects Tinziza (flying holes ø 10 mm)	eradication of insect pests and treatment with wood preservatives	5,000	
Compound walls and gateways		to be repaired		
Materials		1 truckload of lime, red earth and sand	5,000	
Labour		one master thatcher and three assistants/one year	19,000	
		one team of masons/one year	28,500	
		one team of carpenters/one year	18,000	
Museum	building newly completed (100m ²)	showcases and equipment extension for exhibition	60,000 60,000	
			245,000	
Estimated cost, including 25 per cent contingencies			61,250	306,250.00

3. Nargha Selassie Church : (approximately 350m² floor area)

ITEM	PRESENT CONDITION	REPAIR RECOMMENDATIONS	ESTIMATED COST	TOTAL COST
Roof	corrugated iron sheeting	to be replaced by thatch 160m ³ /200 Birr	32,000	
walls	rendered with cement plaster	to be stripped off and re-plastered with lime mortar		
				468,500,00

Transport

3. Nargha Selassie Church (cont.)

32,000

Floor cement screed on steps and plinth

to be stripped off and repaired with flagstone on steps;
bamboo matting on floors

5,000
3,000

Woodwork infected by termites and wood-boring beetles (Tinziza)

eradication of noxious insects and treatment with wood preservatives

5,000

Compound walls and gateway buildings

consolidation and general repair

Pier

improvements

Materials

3 truckloads of lime, red earth and sand

15,000

Labour

one team of thatchers/
one year
one team of carpenters/
one year
two teams of masons/
one year
15 unskilled labourers /
one year

15,000
18,000
57,000
22,500

177,500

Estimated cost, including contingencies

25 per cent

44,375

221,875.00

4. Daga Istaphanos (approximately 150m² floor area)

ITEM	PRESENT CONDITION	REPAIR RECOMMENDATIONS	ESTIMATED COST	TOTAL COST
Roof	thatch	to be renewed: 60m ³ /200 Birr	15,500	
Walls	irregular rubble construction rendered with "chika"	Re-erection of eastern gable wall, repairs and rendering with "chika"	3,000	
Timber posts		replacement and repair	2,000	
Floor	straw	new bamboo matting	1,500	
Woodwork		repair of east window treatment with wood preservatives	3,000	
Floor	straw	to be covered with bamboo matting	1,500	
			<u>26,500</u>	<u>690,375.00</u>

Transport

690,375.-

4. Daga Istaphanos (cont.):

Labour

26,500.-
 one thatcher/one year 15,000.-
 one masonry/one year 28,500.-
 two carpenters/one year 36,000.-

Treasure building

extension with app. 40m²
 floor area 20,000.-
 showcases and finishing 10,000.-
 136,000.-

Total estimated cost including contingencies

25 per cent 34,000.- 170,000.-

5. Tana Chercos

ITEM	PRESENT CONDITION	REPAIR RECOMMENDATIONS	ESTIMATED COST	TOTAL COST
Plinth	foundations crumbling	repairs	1,000.-	
Roof	thatch in bad condition	replacement complete with rafters and purlins partly renewed	16,000.-	
Walls	irregular rubble embedded in clay mortar, rendered with "chika", west gable wall damaged and bulging outwards	re-building of west wall, general repairs and rendering with "chika"	5,000.-	
Timber Woodwork	timber posts attacked by termites "wanza" wood damaged by termites	partial replacement existing door panels to be repaired, decayed parts made good by making scarfed joints but not completely replaced. Timber to be seasoned three years before use. Eradication of noxious insects, treatment with wood preservatives	1,000.- 40,000.-	
Floor	earth-packed floor with straw	to be covered with bamboo matting	1,000	
Labour		one thatcher/one year one mason/one year one carpenter/one year	15,000 28,500 18,000	
Pier	no landing pier exists	15 unskilled labourers / one year	22,000	
Total estimated cost including contingencies		25 per cent	147,500 36,875	184.375

Transport

1,044,750.-

6. Medhane Alem, Rema (approximately 300m² floor area).

ITEM	PRESENT CONDITION	REPAIR RECOMMENDATION	ESTIMATED COST	TOTAL COST
Roof	thatch in poor condition	to be replaced: 120m ³ /2,000 Birr	24,000.-	
Walls	irregular rubble embedded in clay mortar, rendered with "chika"	to be repaired and re-plastered		
Floor	earth-packed floor with straw	to be covered with bamboo matting	3,000.-	
Woodwork		to be repaired and treated with wood preservatives; new fencing of bamboo	6,000.-	
Labour		one team of thatchers/one year	15,000.-	
		one team of masons/one year	28,500.-	
		one team of carpenters/one year	18,000.-	
Landing pier	non-existent	10 unskilled labourers / one year	15,000.-	
			<u>109,500</u>	
Total estimated cost, including contingencies		25 per cent	<u>27,375.-</u>	136,875.-

7. New museum premises in Bahar Dar: LAKE TANA REGIONAL MUSEUM

Construction of a new museum, including regional conservation laboratory for mural paintings and parchment manuscripts from Lake Tana churches and monasteries. Establishment of a regional museum collection of ecclesiastical art; exhibitions on monastic life, building of traditional reed boats ("tankwas"), major geographical features of the region, and the history of discovery of the sources of the Blue Nile. Ample space should be provided for storage, general services, offices and visitor amenities.

Estimated requirements approximately 850m ² of floor space:	850/1,000 Eth. Birr	850,000.-
furniture and equipment		200,000.-
design and planning		<u>100,000.-</u>
		1,150,000.-

Total estimated cost, including contingencies 25 per cent

287,500 1,437,500
2,619,125.-

LAKE TANA'S CHURCHES AND MONASTERIES AT LAKE TANA: OUTLINE PROGRAMME AND
SUMMARY OF COSTS:

SUMMARY OF COSTS:

Grand total estimated cost, Eth. Birr: 2,619,125

8. International consultants

- architect-restorer, estimated time 2x3 months)
- restorer of paintings 4x3 months) for costing refer
- museum adviser 2x3 months) to Annex XII
- ethnographic researcher 2x3 months)

9. International fellowships

- one international fellowship in the restoration)
of mural paintings, for 2 years)
- one international fellowship in restoration of)
manuscripts for 2 years)
- one international fellowship in museology for)
one year) for costing refer
to Annex XII
- two international fellowships in restoration of)
mural paintings each for four months (ICCROM))
- two international fellowships in wood preservation,)
for two months (ICCROM))

ANNEX D

CASTLES AND PALACES OF GONDAR: OUTLINE PROGRAMME OF WORK AND SUMMARY OF COSTS

A: Fasil Ghebbi, the imperial compound: Continuation of preventive maintenance of buildings and environment; completion of survey drawings and preparation of detailed work drawings for restoration of individual buildings; repair work to individual buildings and their adaptation for re-use as museums or workshops, for cultural activities, and public convenience. Generally, further work remains to be done to the windows, doors, roofs, staircases, balconies; and before buildings can be used for the intended purposes, lighting and internal finishings need to be installed.

1. Castle of Fassilides: (approximately 1,300m² of floor area)
 - restoration and adaptation for use as a Regional Museum according to tentative sketch plans by Unesco consultant and Ethiopian architect
 - total estimated cost, including contingencies 2,000,000

2. Castle of Emperor Bakafa: (approximately 700m² of floor area)
 - structural consolidation, new roofing, restoration and conversion into handicraft workshops, display areas and sales shop, subject to suggestions for structural consolidation by engineer.

 - suspended flat timber roof construction:
 - north wing: 50x7=350m²x750 Birr 262,500.-
 - south wing: 45x5=225m²x750 Birr 168,750.-
 - tie beams for consolidation of north wing masonry 15,000.-
 - windows and doors: app. 45 items x1,000 Birr 45,000.-
 - two truckloads of lime and sand 10,000.-
 - furnishing, finishing and equipment 250,000.-
 - one team of masons⁽¹⁾ for one year 28,500.-
 - one team of carpenters⁽¹⁾ for three years 56,000.-
 - 835,750.-
 - contingencies 25 per cent 208,925.-
 - Total estimated cost 1,044,675 1,044,675

3. Palace of Mentuab: (approximately 650m² floor area)
 - ground floor was restored under project ETH/74/014 and now used as public library; restoration of upper floors to be completed and adapted for future use as assembly hall and conference rooms with service facilities; kitchen to be equipped by hotel organization on contract basis.

(1) For composition of team see Annex IX.

brought forward 3,044,675.-

3. Palace of Mentuab (cont.):
- furnishing and equipment 40,000.-
- one team of masons for one year 28,500.-
- one carpentry task force for one year 18,000.-
86,500.-
- contingencies 25 per cent 21,625.-
- Total estimated cost 108,125.- 108,125.-

B. Fassilides Bath: (approximately 250m² floor area)
- building to be restored, including renewal of suspended floors and roof; consolidation of masonry walls, towers and gateways; repair of water basin;
Consolidation of masonry walls subject to calculations by a structural engineer.
- suspended timber floors and roofs: 250m²x750= 187,500.-
renewal of doors and windows: 20 items each, 1,000= 20,000.-
- staircases and rails 10,000.-
- 5 truckloads of lime and sand 25,000.-
- water pump and connection to city's main water-supply 15,000.-
- two teams of masons for two years 114,000.-
- one team of carpenters for two years 36,000.-
407,500.-
- contingencies 25 per cent 101,875.-
- Total estimated cost 509,375.- 509,375.-

C. Cusquam palace ruins and compound:
- the palace to be preserved in its ruined state; consolidation and repairs to the enclosure walls, turrets and gateways; repairs and renovation of church building.
- three truckloads of lime and sand 15,000.-
- one team of masons for two years 57,000.-
- renovation and repairs to the church 48,000.-
120,000.-
- contingencies 25 per cent 30,000.-
- Total estimated costs 150,000.- 150,000.-

Grand total estimated cost of restorations and repairs, Eth. Birr 3,812,175.-

International consultants

- architect-restorer, estimated time 2x3 man/months)
- structural engineer 2x2 weeks) for costing
- archaeologist 2x3 man/months) refer to
- museologist 2x3 man/months) Annex XII

D. International fellowships

- two international fellowships in architectural restoration, each for 6 months (ICCROM))
- two international fellowships in museology, each for one year)

for costing refer
to Annex XII

ANNEX E

THE WALLED TOWN OF HARAR: OUTLINE PROGRAMME OF WORK AND SUMMARY OF COSTS

1. Upgrading of traditional housing: cost estimates are based on the most urgent needs for rehabilitation of approximately 300 houses at a cost of Eth. Birr 10,000 each, covering purchase of locally available materials and payment of skilled labour.

Total estimated cost 3,000,000

2. Repair and restoration of town walls and gates:

- one team of masons for 5 years	142,500.-	
- quarrying of local stone/3 skilled workers	67,500.-	
- transport and purchase of equipment	75,000.-	
- Total estimated cost	285,000.-	285,000

3. Improved pavement of streets and lanes with local stone:

- one team of masons for five years	142,500.-	
- quarrying of local stone/3 skilled workers	67,500.-	
- transport and purchase of equipment	75,000.-	
- total estimated cost	285,000.-	285,000

4. Renovation of central market building and construction of public toilets with septic tanks.

Total estimated cost 200,000

In Section 8.8 (d) Improvement of infrastructure it is suggested that citizens carry out this work on a voluntary basis.

5. Restoration of "Jorald House" to be used for Regional museum

This building is commonly associated with the French poet Arthur Rimbaud. Plans were previously prepared with a view to its restoration under French bilateral assistance.

- estimated cost of restoration	250,000.-	
- furniture and equipment	250,000.-	
- total	500,000.-	500,000
Sub-total		4,270,000

brought forward

4,270,000.-

6. Restoration of "Dejazmach Teferi House" to be used as an arts and crafts centre. Centre for production, display and sale of traditional handicrafts goods under guidance of HASIDA.

- estimated cost of restoration	130,000.-	
- furniture and equipment	60,000.-	
- total	190,000.-	190,000.-
		4,460,000.-
contingencies, 25 per cent		1,115,000.-
Total estimated cost, Ethiopian Birr		5,575,000.-

7. Up-grading of houses generally and improvement of public sanitation. Provision should be made for the preparation of an integrated development plan for the whole of the walled town, and for technical assistance to the municipal authorities for building maintenance.

8. International consultants

- Architect-restorer, estimated time	3x3 man/months)	
- Sanitary engineer	2x3 man/months)	for costing
- Museum adviser	2x3 man/months)	refer to
- Ethnographic research and collection	2x3 man/months)	Annex XII

9. International fellowships

- one international fellowship in museology for one year)	
- one international fellowship in ethnography/anthropology for two years)	for costing
- one international fellowship in architectural restoration and urban renewal for one year.)	refer to Annex XII

ANNEX X - F

THE PROTO-HISTORIC SITE OF TIYA - OUTLINE PROGRAMME OF WORK AND ESTIMATE OF COST

Re-erection of some of the fallen stelae, and landscaping of the site with a natural barrier of cactus; creation of a small informal site museum in the village, using either an existing building or a new building in the traditional style with timber frame, wattle-and-daub construction rendered with "chika", thatched roof and bamboo floor matting. The display would consist mainly of documentary photographs and bilingual text in Amharic and English to provide information about the stelae field and the megalithic culture of Soddo region.

	<u>Ethiopian Birr</u>
- landscaping	3,000,-
- construction of building: approx. 50m ² /150 Birr.	7,500,-
- furniture and equipment	<u>3,000,-</u>
- estimated cost	13,500,-
- contingencies 25 per cent	<u>3,375,-</u>
- total estimated cost	16,875,-

ANNEX XI: ESTIMATED COST OF EQUIPMENT AND MATERIALS NOT AVAILABLE
IN ETHIOPIA

- Notes:
- 1) Detailed specifications need to be supplied on the basis of the specific requirements of the respective sections of CRCCH.
 - 2) All costs in US\$, 1984 prices. 1 US\$ = 2.05 Eth Birr. Proposed equipment will be additional to items purchased under project ETH/74/014 (see Appendix B of Terminal Report on project, listed in Annex III of the present report).

Item	No. of items	Cost per item US\$	Total cost US\$
(a) <u>Monuments and Sites</u>			
<u>Preservation Division</u>			
(i) <u>Office equipment</u>			
Plain Paper Copier (A ₃ -A ₄)	1	3,000	3,000
Typewriter (English keyboard)	3	500	1,500
Blueprint Copying Machine	2	2,600	5,200
Filing Cabinets	5	700	3,500
(ii) <u>Field equipment</u>			
Spare parts for repair of equipment purchased previously			1,000
Builder's Portable Concrete Mixer (Benford 150 l)	3	1,500	4,500
Carpenter's work shop equipment (power saw, etc.)			18,000
stone crusher (small)	3	2,000	6,000
Lorry (Calabrese)	2	20,000	40,000
Pick-up (Toyota four-wheel drive vehicle)	5	10,000	50,000
Boat (8 persons) with out-board motor	1	10,000	10,000
Motorboat (for carrying materials)	1	20,000	20,000
Walkie-talkie (20-40km range)	2	250	500
35 mm cameras and accessories	2	700	1,400
Portable Aluminium Scaffolding Tower (15m height)	2	3,000	6,000
Easy-handling Steel tube scaffolding (600m ²)			18,000

Item	No. of items	Cost per item US\$	Total cost US\$
Manual water pump (Patoy DD-120, 120 litre per minute)	2	350	700
Electrical Rotary Drill with expendable bits	1	2,500	2,500
Diesel-powered generator	1	2,500	2,500
Electric generator (5 KW, petrol)	2	800	1,600
Pulley lift (manual)	2	300	600
Sub-total			196,500

(b) Inventory and Inspection Division

Filing cabinets	5	700	3,500
35 mm camera and accessories	5	1,000	5,000
Sub-total			8,500

(c) Ethiopian Manuscripts
Microfilm Department

Microfilm Printer	1	6,400	6,400
Reader Printer	1	4,000	4,000
Storage cabinets for film	3	700	2,100
Small Reader	2	300	600
Camera and accessories (35 mm)	1	6,000	6,000
Portable electric generator	1	2,000	2,000
Sub-total			21,100

(d) Supplementary equipment
for photogrammetry

According to itemized list from photogrammetry expert consultant, estimated in the range of			10,000
Polaroid camera	1	400	400
Filing cabinets for film plates	3	700	2,100
Sub-total			12,500

Item	No. of items	Cost per item US\$	Total cost US\$
<u>(e) Photographic Section</u>			
(estimates according to suppliers' itemized list and costing).			
Complete dark-room equipment			25,000
Studio light system and background system			5,600
Photographic equipment accessories and filing cabinets for slides			28,000
Air-conditioner	1	1,000	1,000
Rotary Processing Machine			24,000
Sub-total			83,600
<u>(f) Interim list of specialized equipment for restoration of paintings</u> (pending itemized list of requirements, including brand names and suppliers)			
(i) Expendable:			2,000
assorted colour pigments			
assorted instruments: brushes, spatulas, scalpels, fibre-glass brushes, rollers, etc.			
Japanese paper, etc.			
chemicals for cleaning, reintegration and fixing.			
(ii) non-expendable:			
simple vacuum hot table	1	5,000	5,000
vacuum cleaner	1	500	500
low-powered binocular microscope	1	1,000	1,000
Sundry equipment: canvas stretcher, stapler for relining of canvases, electric iron, etc.			1,000
Sub-total			9,500

Item	No. of items	Cost per item US\$	Total cost US\$
(g) <u>National conservation laboratory equipment for furnishing new laboratory building</u>			50,000
Note: itemized list and costing to be worked out by responsible head of the Conservation Laboratory in conjunction with planning for new premises. new premises			
Total (a + b + b + d + e + f + g)			379,700
C.I.F. Addis Ababa (25%)			94,925
Grand total			474,625

ANNEX XII: ESTIMATED COSTS OF PROMOTIONAL ACTIVITIES; TRAINING,
EXPERT AND CONSULTANCY SERVICES (IN US\$)

- Notes: 1) Consultancy services are costed at US dollars 7,000 per man/month all-inclusive.
- 2) International fellowships are costed US dollars 1,700 per month per fellowship, plus US dollars 2,000 for travel expenses.
- For planning purposes the fellowships are grouped according to places of posting.

	duration (man-months)	number of persons	estimated cost in US dollars
<u>(a) Expert Services:</u>			
International co-ordinator	60		420,000
Architect restorer	36		252,000
Painting restorer	12		84,000
Museum adviser	24		168,000
Conservation lab. adviser	36		252,000
Archaeologist	24		168,000
Anthropologist	12		84,000
Structural engineer	3		21,000
Sanitary engineer	6		42,000
Stone conservation specialist	2		14,000
Sub-total expert services	155		1,505,000
<u>(b) Consultancy Services:</u>			
Miscellaneous Fields (2 man-months per annum for 10 years)	10		140,000
<u>(c) Publications:</u>			
Guide-books, brochures, posters, films			100,000
<u>(d) Annual Review of Project:</u>			
(Travel and per diem) 3 weeks per annum for 10 years	7-1/2		75,000

		<u>duration</u> <u>(man-months)</u>	<u>number of</u> <u>persons</u>	<u>estimated cost</u> <u>in US dollars</u>
e)	<u>Training:</u>			
	(i) Aksum:			
	museology	21	1	
	archaeology	63	3	
	conservation (ceramics)	21	1	118,500
	(ii) Lalibela:			
	archaeology	21	1	
	stone conservation (ICCROM)	3	1	44,800
	(iii) Gondar:			
	architectural conservation (ICCROM)	12	2	
	museology	18	2	33,500
	(iv) Lake Tana:			
	mural painting restoration	21	1	
	mural painting (ICCROM)	8	2	
	museology	9	1	
	manuscript restoration	21	1	
	wood conservation (ICCROM)	4	2	121,100
	(v) Harar:			
	museology	9	1	
	ethnography	21	1	
	architectural restoration and urban renewal	9	1	72,300
	(vi) Conservation Laboratory:			
	conservation science (ICCROM, 4-month course)	32	8	
	manuscript restoration	21	1	
	object restoration	21	1	
	painting restoration	21	1	
	photography	18	2	218,100
	(vii) Inventory and Inspection Section			
	art history	42	2	
	documentation	42	2	150,800
	(viii) Central Museums			
	security, climate control and lightning in museums (ICCROM, 2 week course)	2	4	
	museology	42	2	90,200
	Sub-total (training)			849,300
	Grand total			2,669,300

APPENDIX XIII: TECHNICAL MEMORANDUM: CALCULATION OF THE STABILITY OF THE STANDING STELE, AKSUM

The aim of the calculation is to ascertain the present stability of the stele in view of its inclination and possible wind pressure.

The calculations are made on the assumptions that (i) the footing of the stele reaches 3 metres below ground level and has the same cross section as the part above ground level; (ii) the horizontal earth pressure, both active and passive, is assumed to be zero, which, though it may err on the safe side, is the only possible estimate in the absence of data concerning soil conditions; (iii) the wind pressure is estimated to reach figures equal to the Danish Standards, DS₃410.2; and (iv) the specific gravity of basalt/granite is assumed to be 2.7 t/m³.

Structural analysis:

1. The centre of gravity is estimated at: $z = 11$ m as measured from the bottom of the stele.
2. The resultant (out of the self weight) is situated with an eccentricity of (see attached drawing):

$$e_1 = \frac{0.75 \times 11}{21} = 0.40 \text{ m};$$

$$e_2 = \frac{0.48 \times 11}{21} = 0.25 \text{ m};$$

3. Total weight: $P = 1/2 (2.8 \pm 1.8) \pm 1/2 (1.25 \pm 0.95) \times 24 \times 2.7 = 164 \text{ t}$
4. Effective area of foundation: $2 \times 1 \times 2 \times 0.37 = 1.5 \text{ m}^2$
5. Bearing pressure, in vertical and inclined positions respectively:

$$\text{Vertical stress: } s_v = \frac{164}{2.8 \times 1.25} = 47 \text{ t/m}^2$$

$$\text{Actual bearing pressure: } s_i = \frac{164}{1.5} = 109 \text{ t/m}^2$$

6. Wind pressure on the broad side (abbreviations refer to Danish Standards):

$$z_0 = 0.05; \quad q_{21m} = 95 \text{ kp/m}^2; \quad q_0 = 53 \text{ kp/m}^2$$

$$\text{proportion: } \frac{l}{b} = \frac{2.4}{1.2} = 2.0; \quad h_{\max} = 21 \text{ m}$$

$$c = 2.2 - 0.2 \times 2 = 1.8$$

$$\text{wind force at top: } w_t = 95 \times 1.8 \times 1.9 = 325 \text{ kp/m}$$

$$\text{wind force at bottom: } w_b = 53 \times 1.8 \times 2.7 = 260 \text{ kp/m}$$

$$\text{mean wind force: } w_m = 300 \text{ kp/m}$$

$$\text{wind moment: } M_v = 300 \times 21 (3 \pm 1/2 \times 21) \times 10^{-3} = 85 \text{ tm}$$

$$\text{eccentricity: } e = \frac{Mv}{P} = \frac{85}{164} = 0.50 \text{ m}$$

$$\text{horizontal max shear force: } V = 300 \times 21 \times 10^{-3} = 6.3 \text{ t.}$$

A wind pressure of this strength means that P will be located outside the cross section of the stele at foundation level.

CONCLUSION:

The vertical drop of the centre of gravity falls just on the edge of the kern of the stele bringing about an increased bearing pressure of about 109 t/m^2 , which is relatively high, but which is not likely to cause problems to the stability of the stele. No cracks have been observed.

The inclination might pose a danger to the stability of the stele if a gale blows from the most dangerous direction, thus adding an eccentricity that might be fatal to its stability. Since its erection the stele has succeeded in resisting all probable strengths of winds, but if its inclination is increased for various reasons or the conditions of the foundations are deteriorating, there is always the possibility of an exceptional wind or an earthquake, which may cause the structure to collapse.

The present crude structural analysis indicates that deterioration of the present condition may be fatal to the structure. It is therefore recommended that (i) the stele's foundation be investigated by a structural engineer and (ii) possible further movements be monitored meticulously at regular intervals.

(These calculations were most generously made by Ture Wester, civil engineer, Department of Structural Design, Academy of Fine Arts, Copenhagen).

Organization chart of CRCCH

In 1984 Some sections exist on paper only. Those actually functioning are indicated with a double contour line.

Table 1

Centre for Research and Conservation of Cultural Heritage

Secretariat

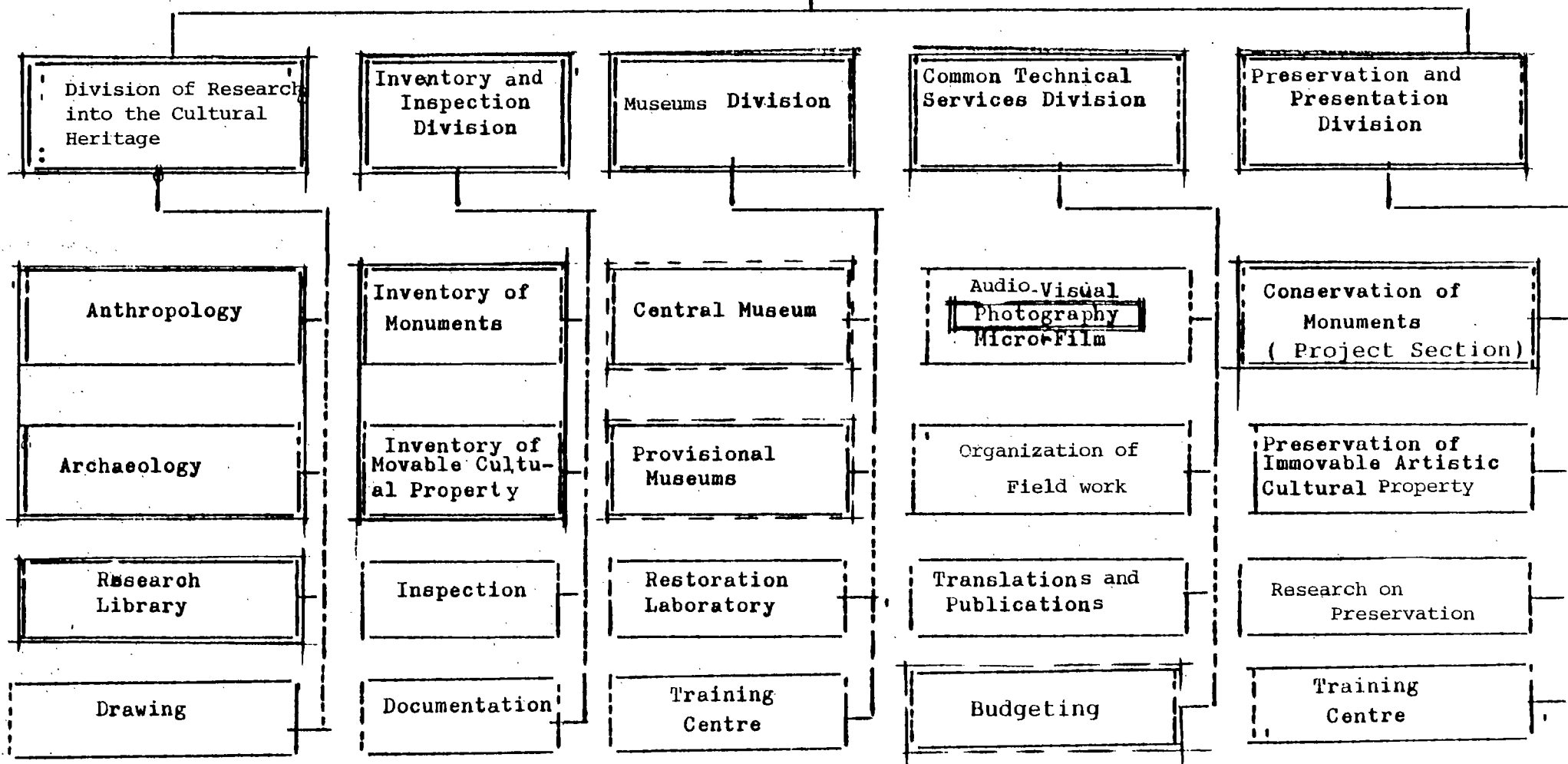


Table 2:

PROPOSED REVISION OF THE ORGANIZATIONAL STRUCTURE OF THE CENTRE FOR RESEARCH AND CONSERVATION OF CULTURAL HERITAGE:

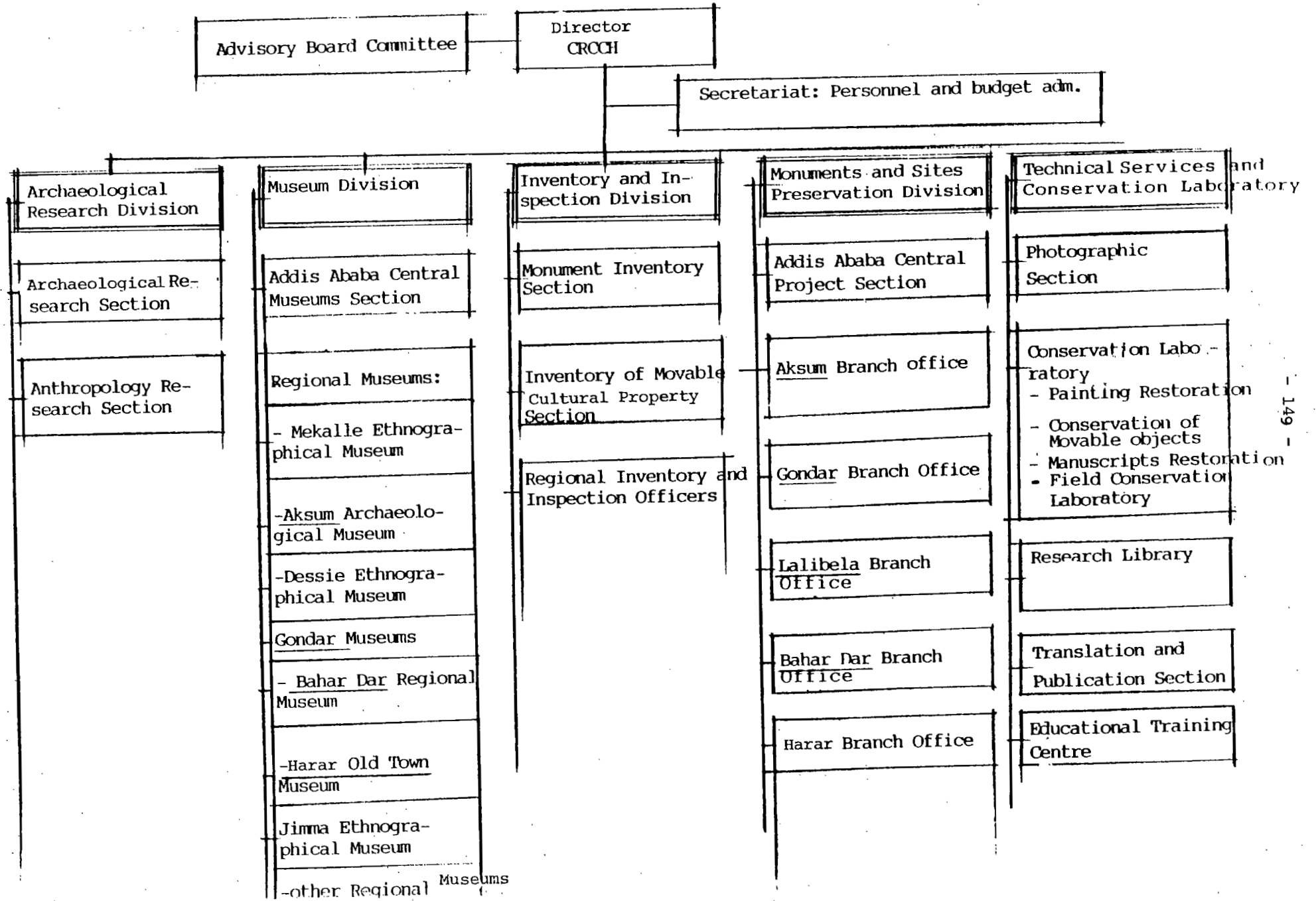




Figure 1. Major historic sites dealt with in the Master Plan

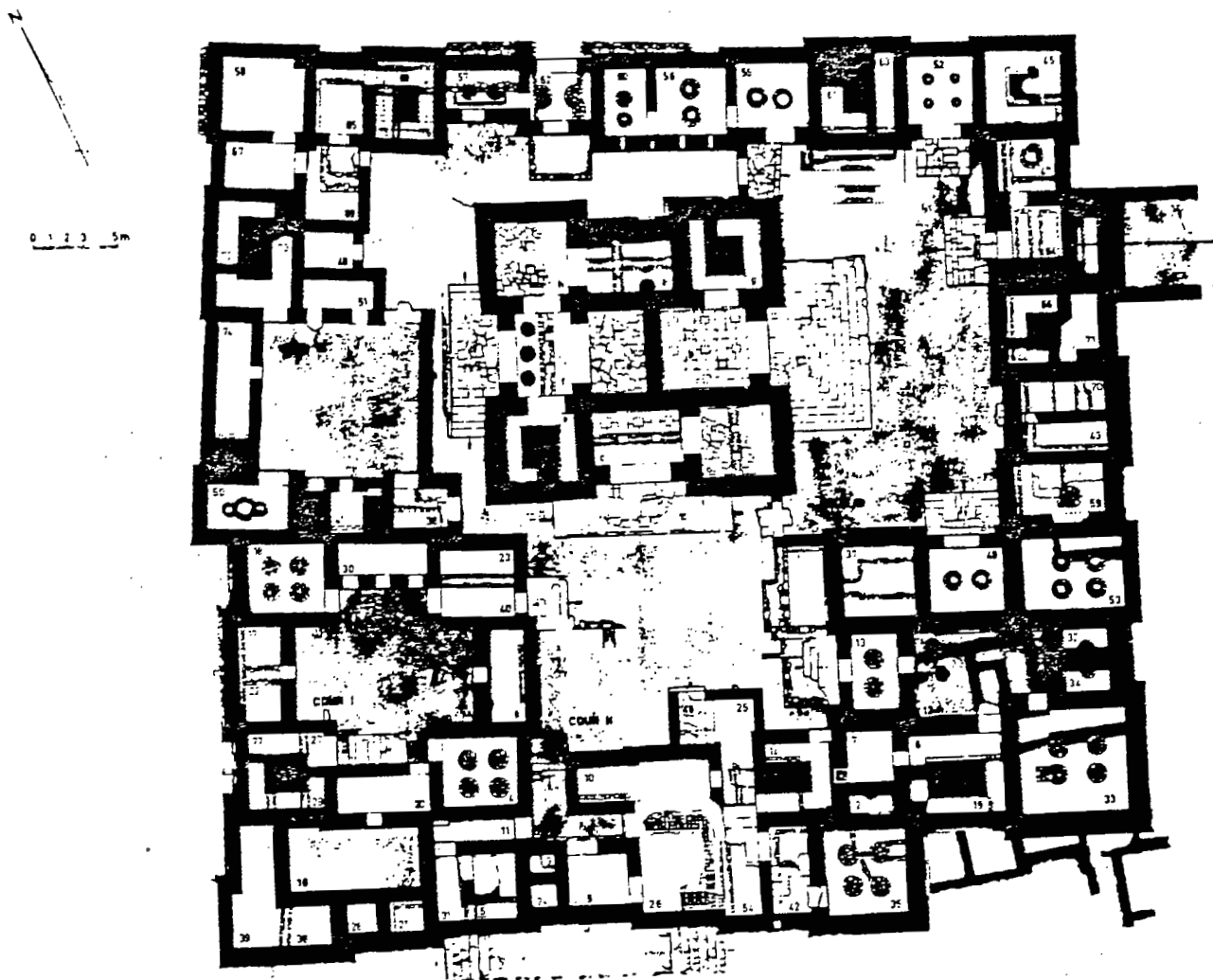


Figure 2. Plan of Dungur Palace (French Archaeological Mission)

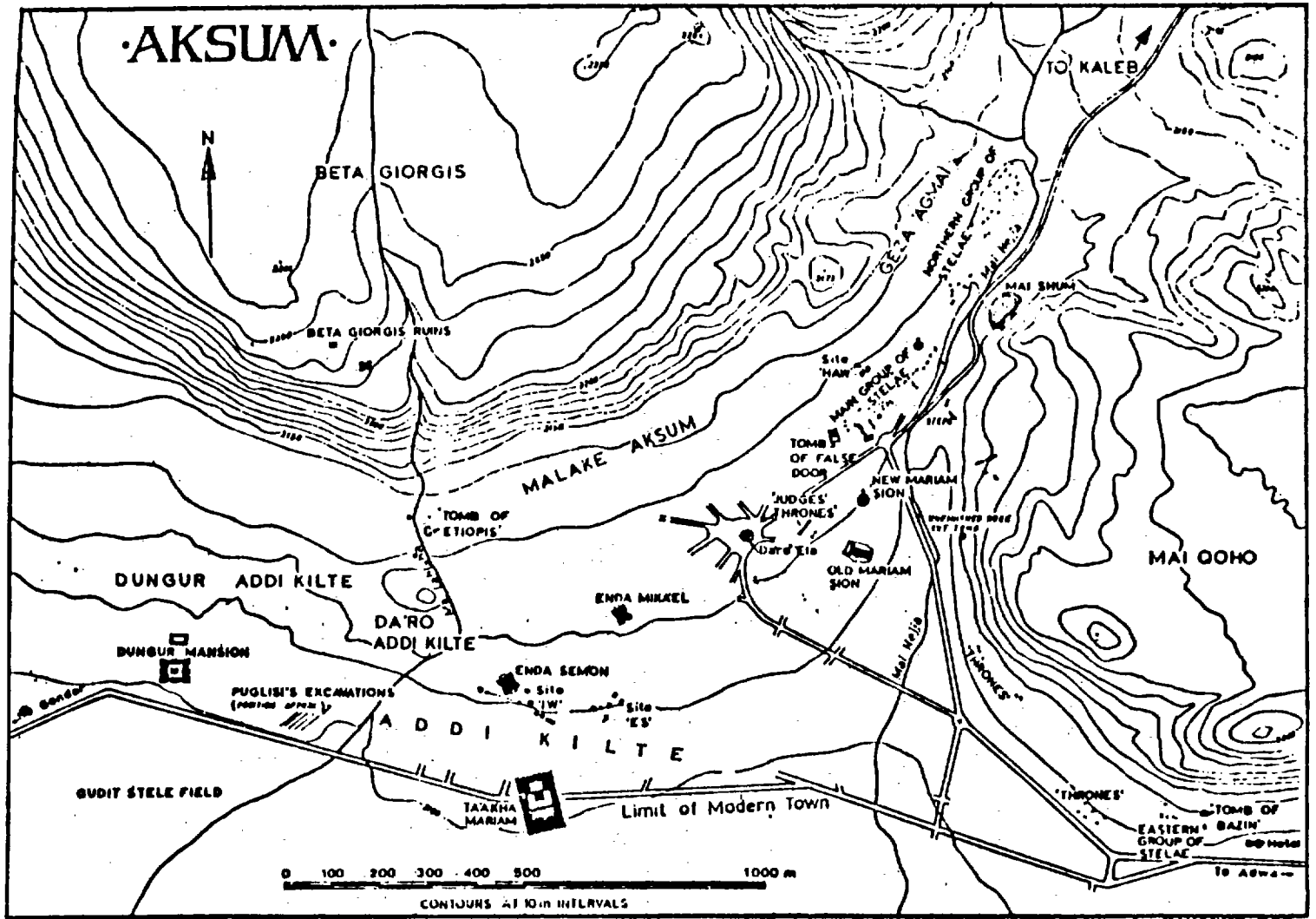


Fig. 5 Map of Aksum, most modern streets omitted. Ta'akha Maryam, Enda Mika'el and Enda Sem'on (Deutsches Aksum Expedition, Berlin 1913)

Excavations at Aksum

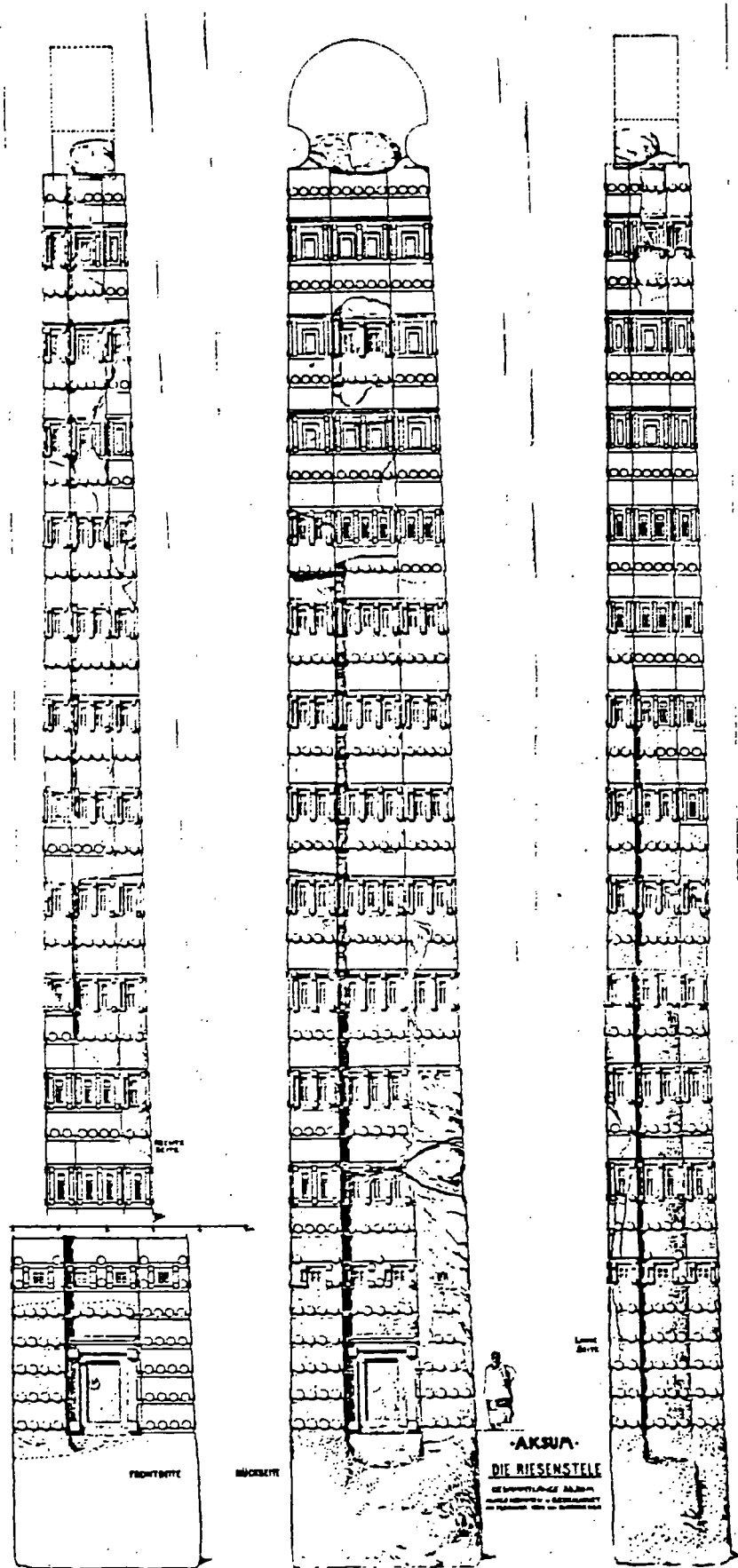


Figure 4. Reconstruction of the Giant fallen Stele, Aksum (DAE, 1913)

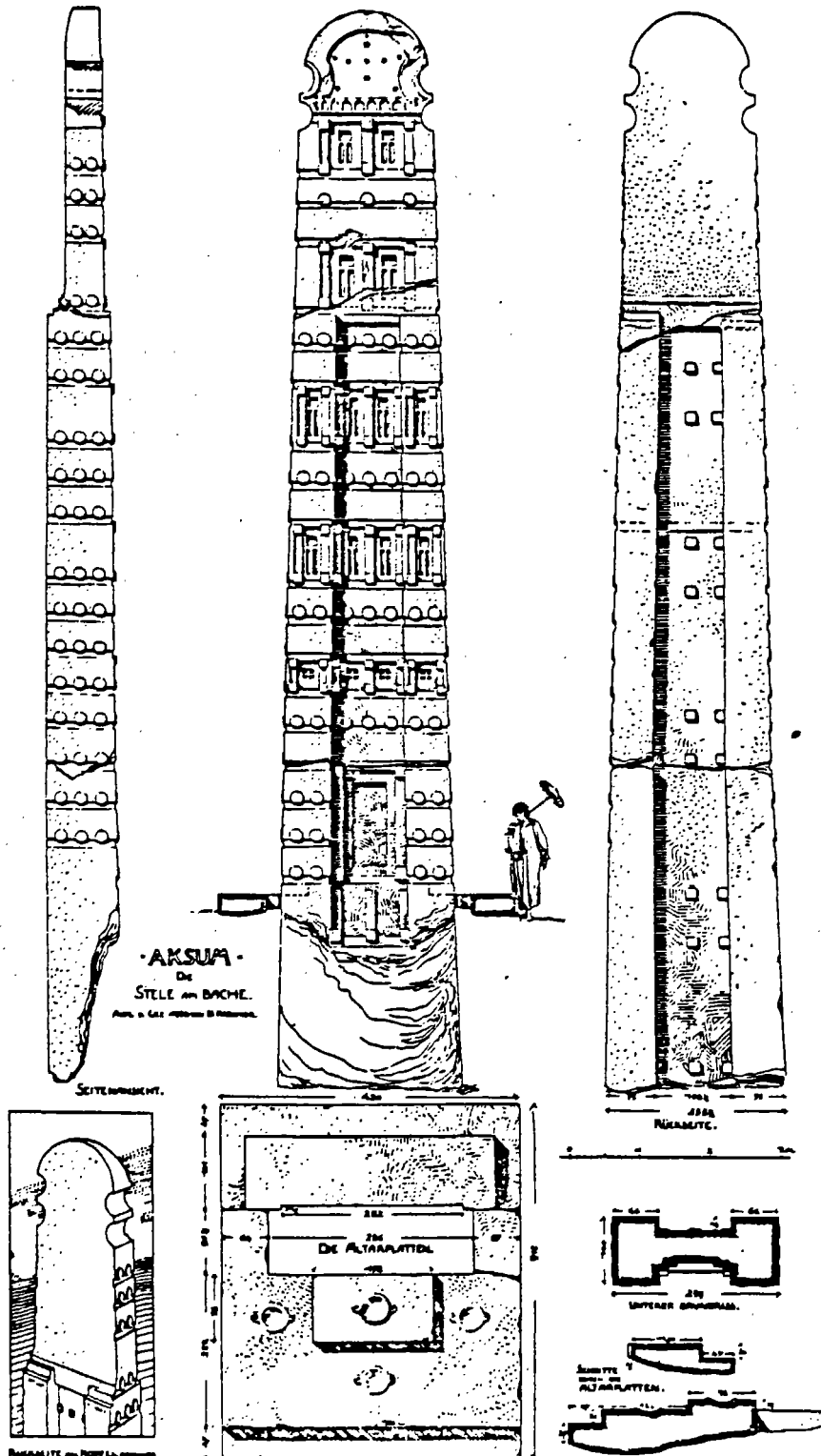
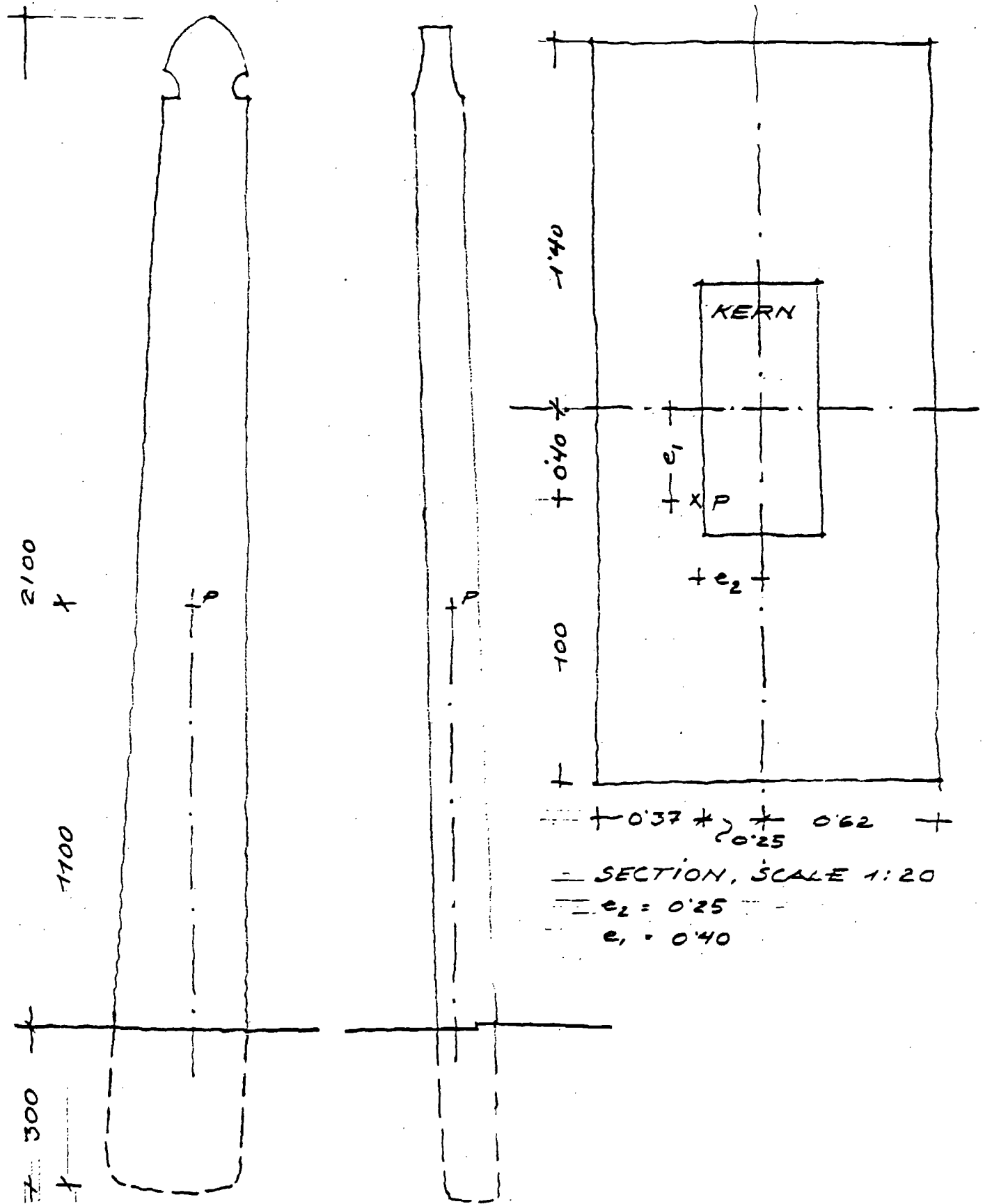


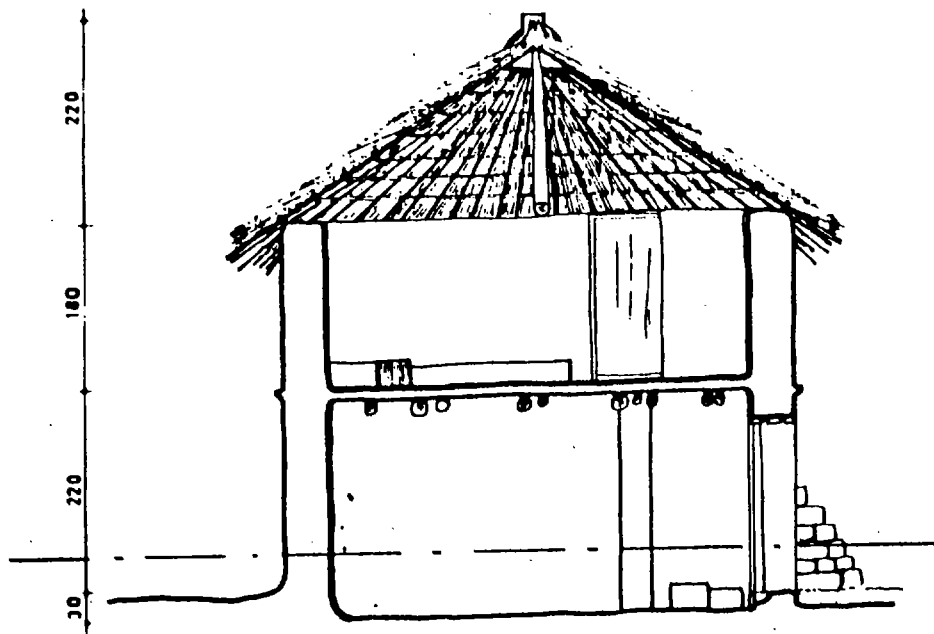
Figure 5: Reconstruction of the fallen stele in the river bed of Maj Hejja, Aksum (DAE, 1913)



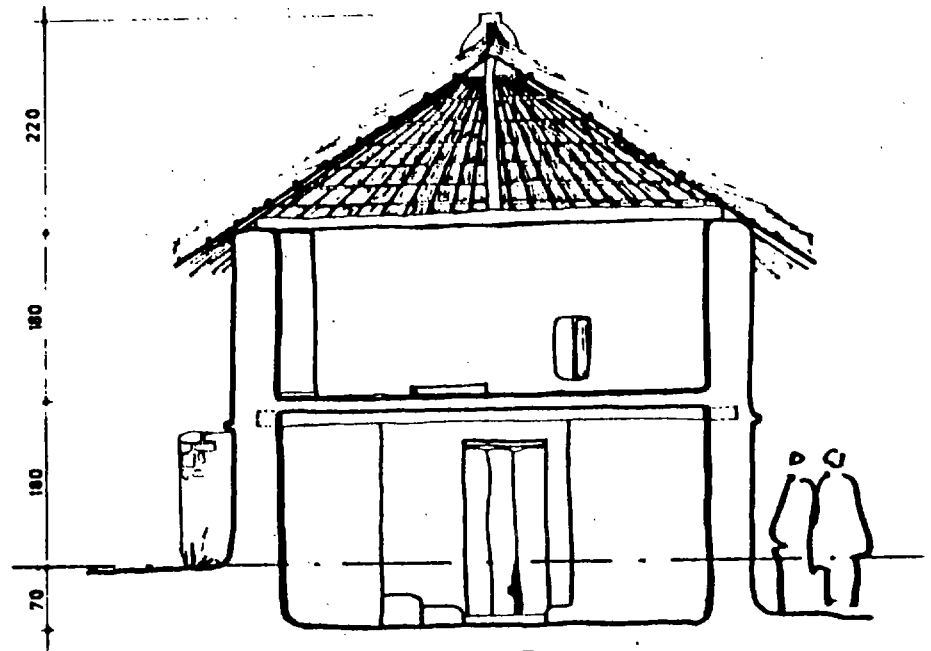
SECTION, SCALE 1:20
 $e_2 = 0.25$
 $e_1 = 0.40$

THE ERECT STELE, AKSUM, SCALE 1:100.

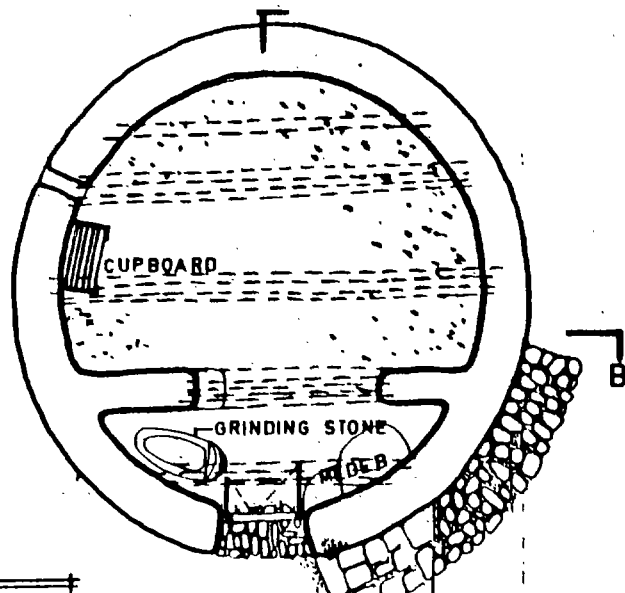
Figure 5 a



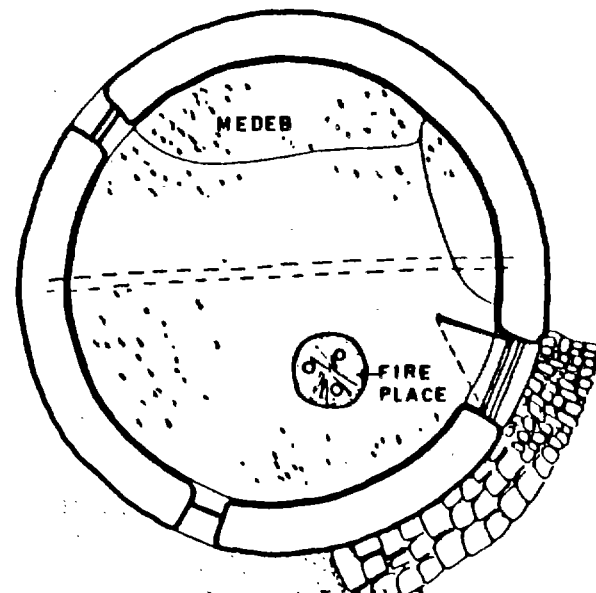
SECTION A-A



SECTION B-B



GROUND FLOOR PLAN



UPPER FLOOR PLAN

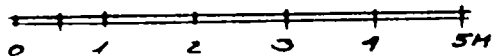


Figure 6: Plan and section of 'Tukul', vernacular house, Lalibela.

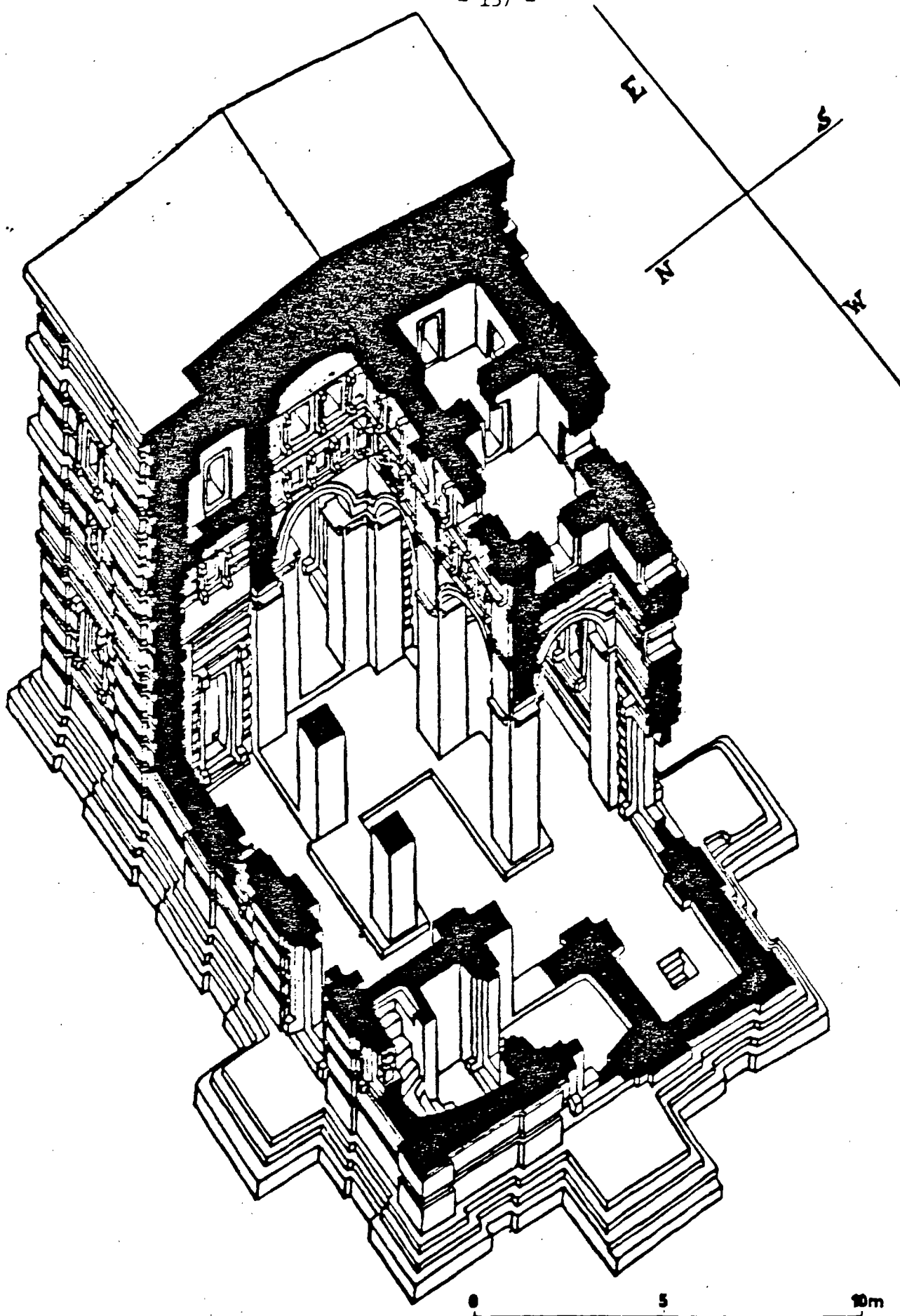
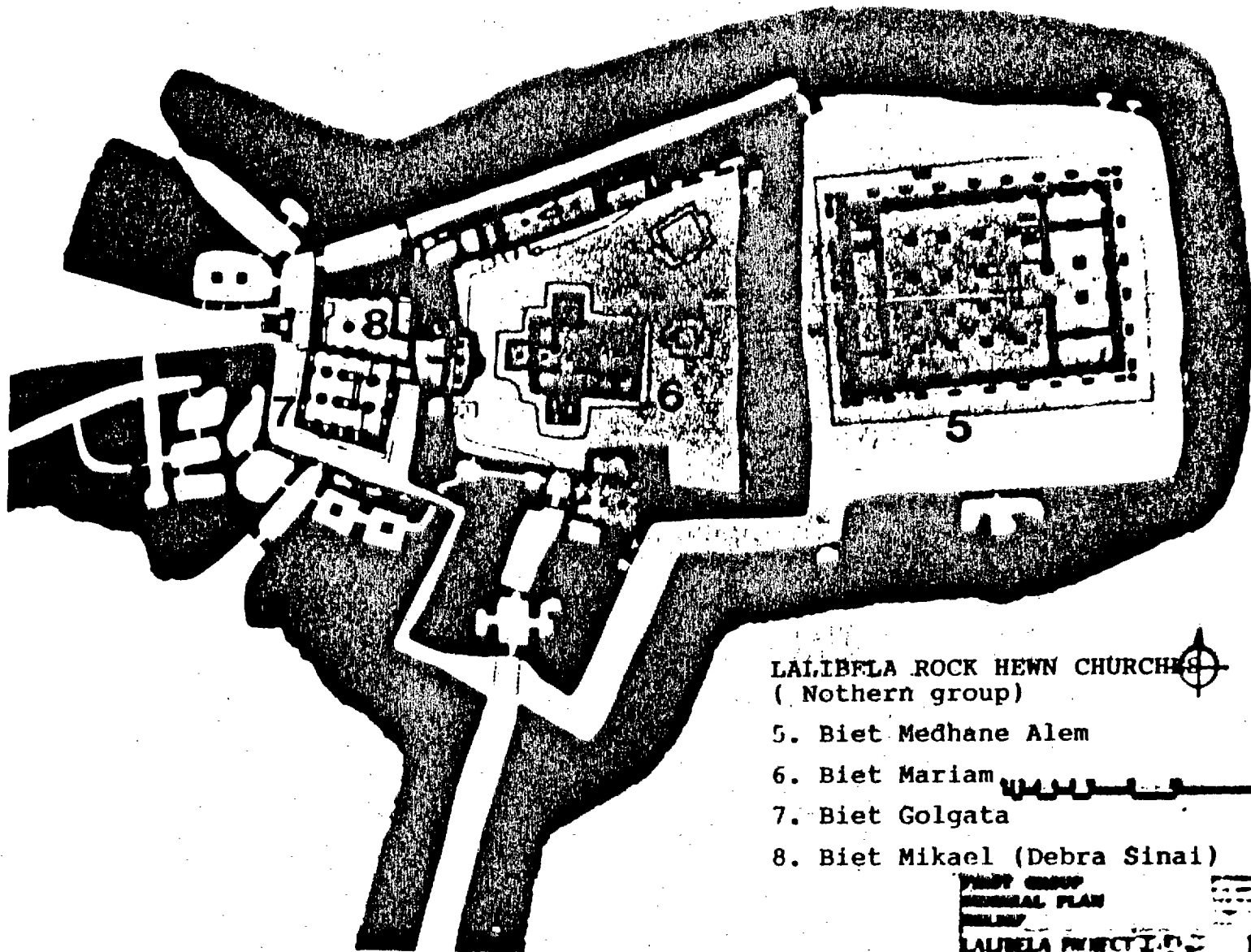


Figure 7: Biet Emanuel, Lalibela, dissected isometric view from an etching by L. Bianchi Barriviera.



LALIBELA ROCK HEWN CHURCHES
(Northern group)

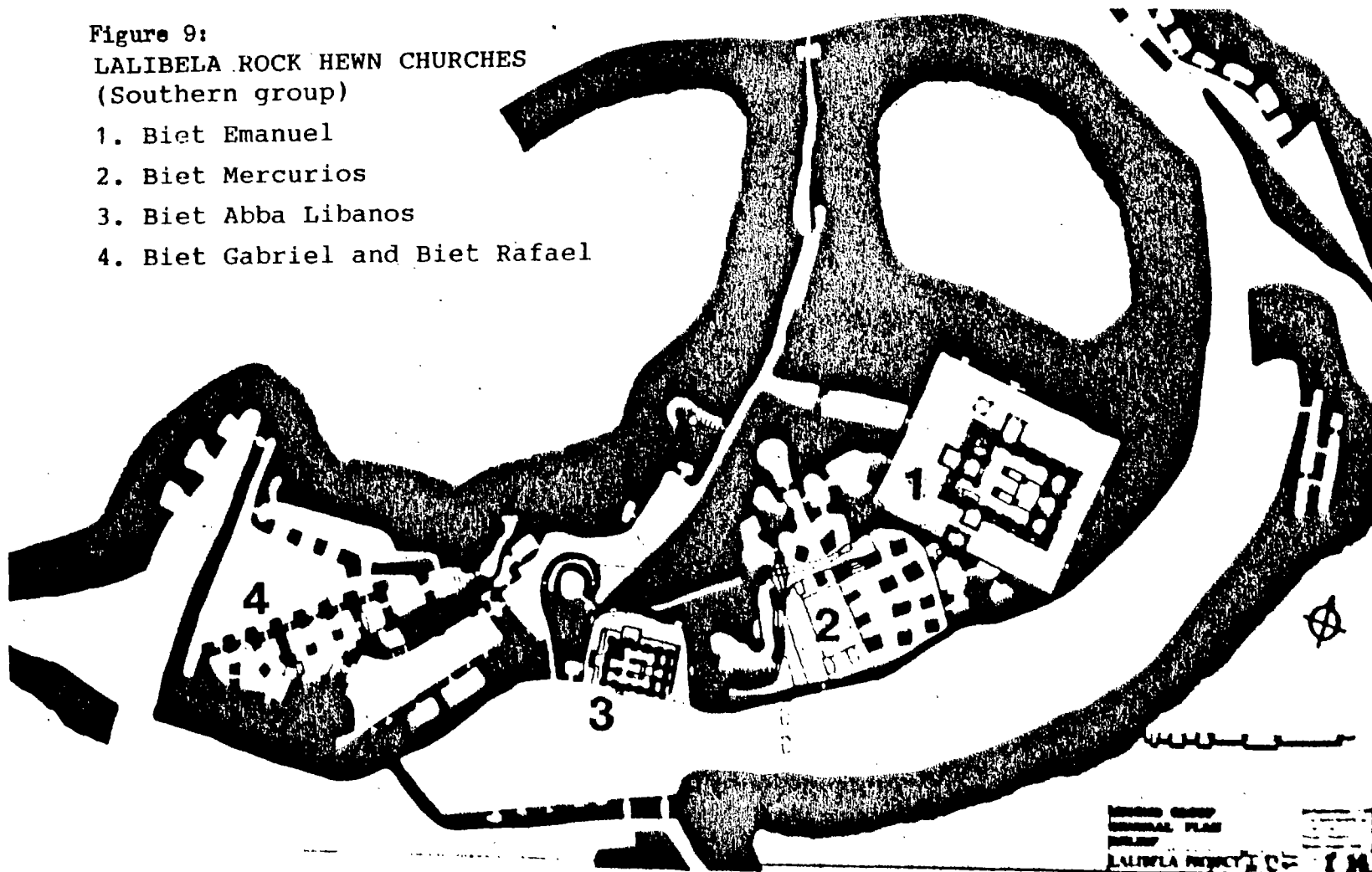
- 5. Biet Medhane Alem
- 6. Biet Mariam
- 7. Biet Golgata
- 8. Biet Mikael (Debra Sinai)

FIRST GROUP
 GENERAL PLAN
 SCALE
 LALIBELA PROJECT NO. 113

Figure 8: Site plan of northern group of rock-hewn churches, Lalibela.

Figure 9:
LALIBELA ROCK HEWN CHURCHES
(Southern group)

1. Biet Emanuel
2. Biet Mercurios
3. Biet Abba Libanos
4. Biet Gabriel and Biet Rafael



FASIL GHEBI; GONDAR

- 1 Fassilides Castel
- 2 Izadich Yohannes Library
- 3 ----- Chancellary
- 4 Yasus Castle
- 5 David III Castle
- 6 Bakkafa Castle
- 7 Mentuab Palace

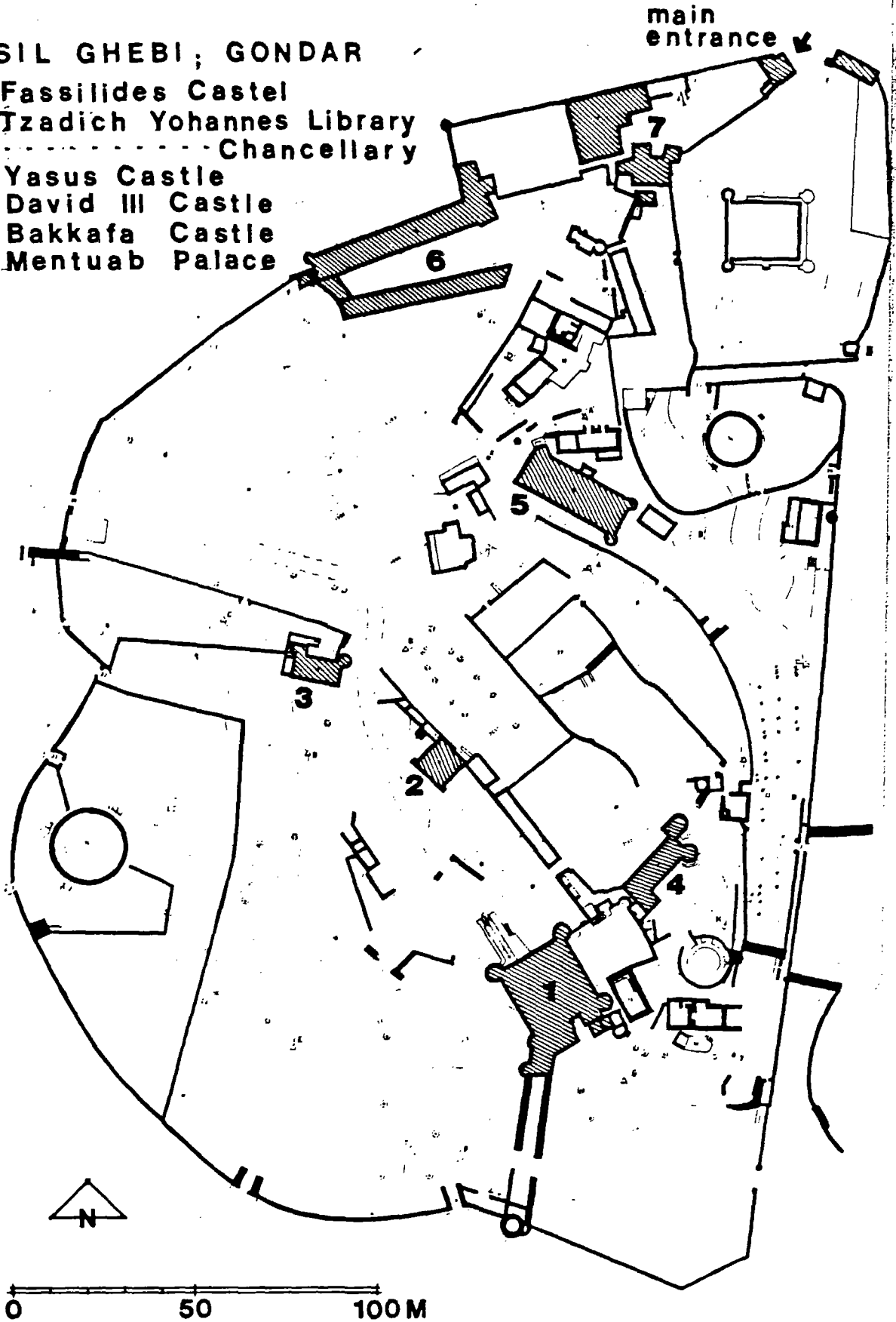
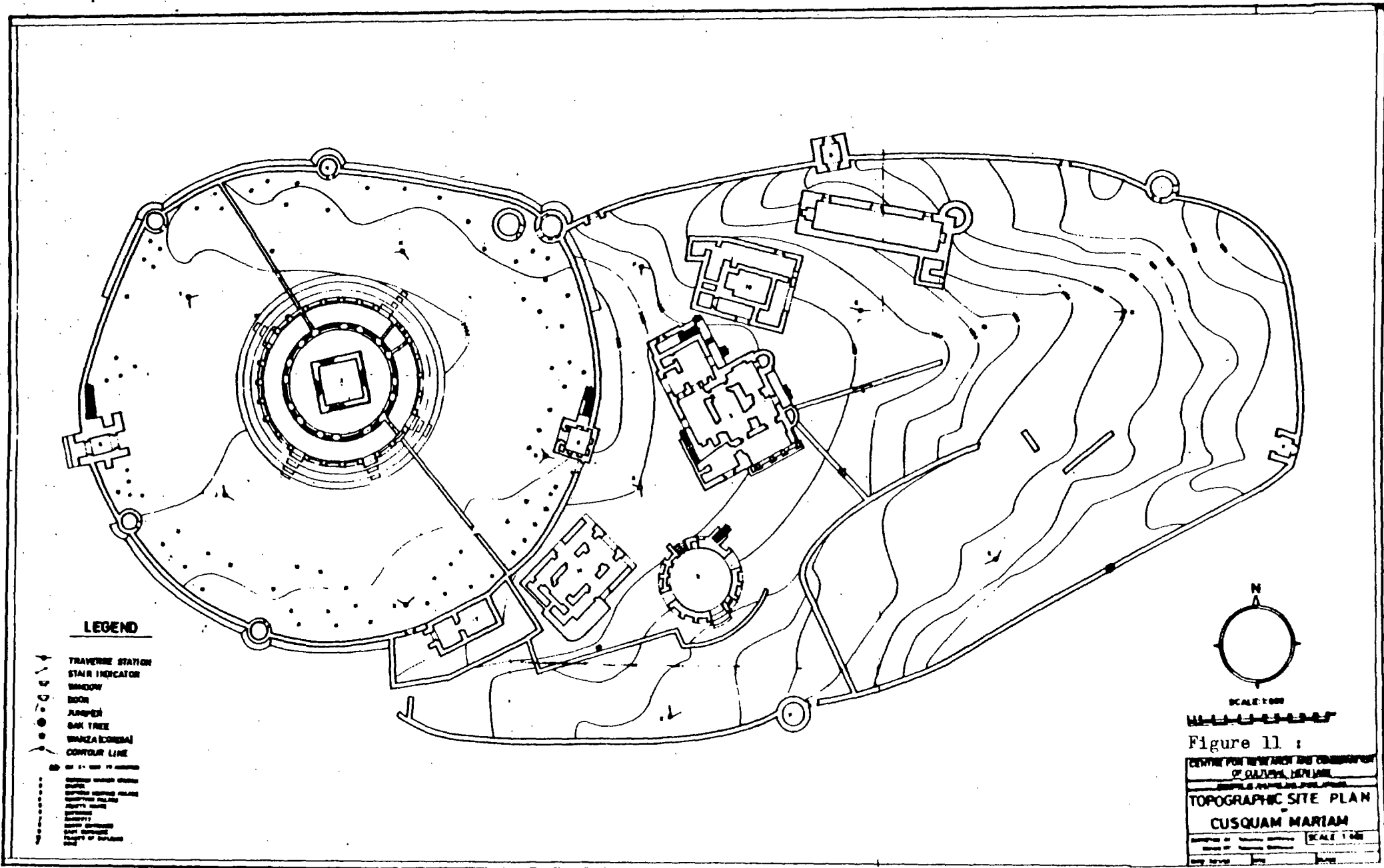


Figure 10: Site plan of Fasil Ghebbi, Gondar



LEGEND

- TRAVESSE STATION
- STAIR INDICATOR
- WINDOW
- DOOR
- JUNIPER
- OAK TREE
- WICKET (WICKET)
- CONTOUR LINE

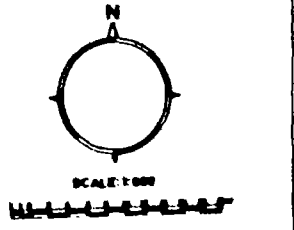
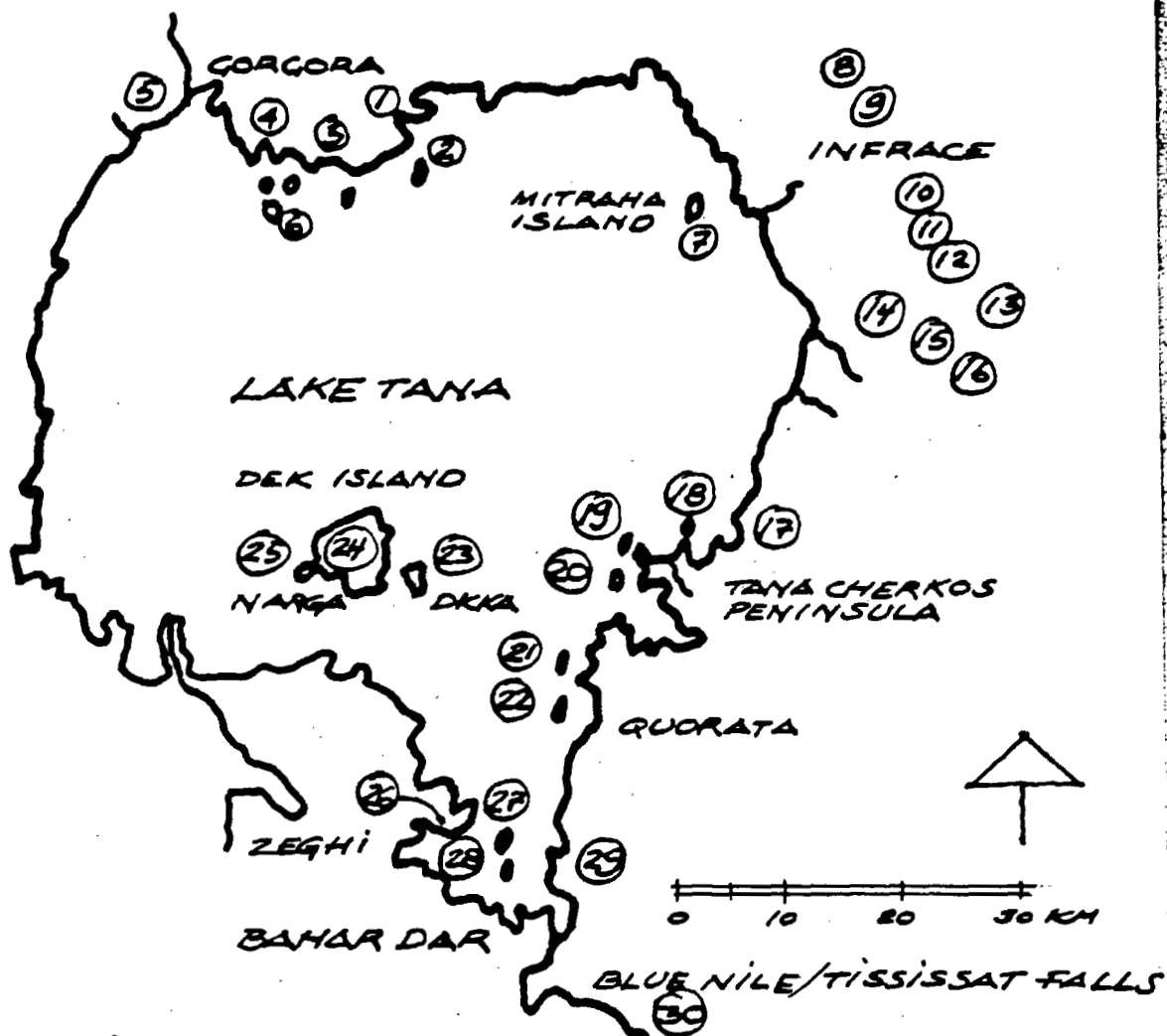


Figure 11 :
 CENTRE FOR RESEARCH AND CONSERVATION
 OF CULTURAL HERITAGE
 TOPOGRAPHIC SITE PLAN
 CUSQUAM MARTIAM
 SCALE 1:100

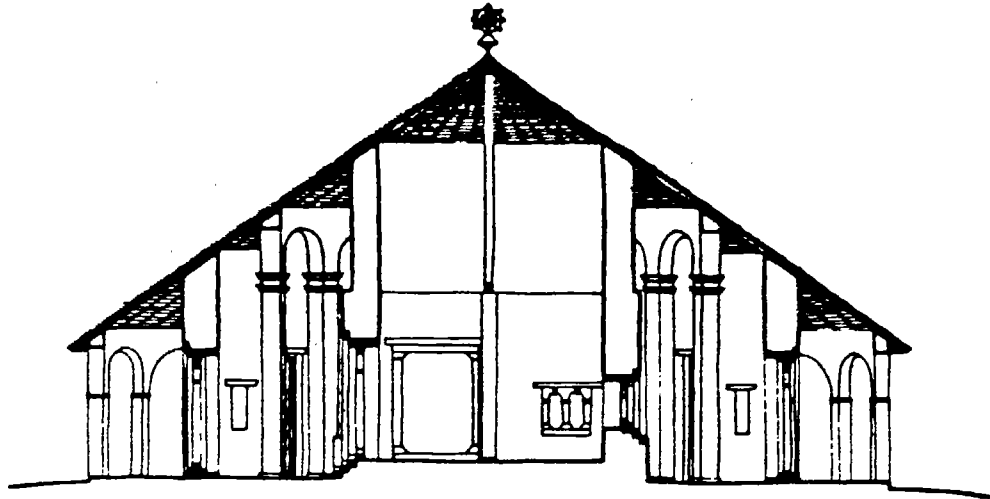
LAKE TANA AND ITS ISLANDS: MAJOR MONUMENTS AND SITES



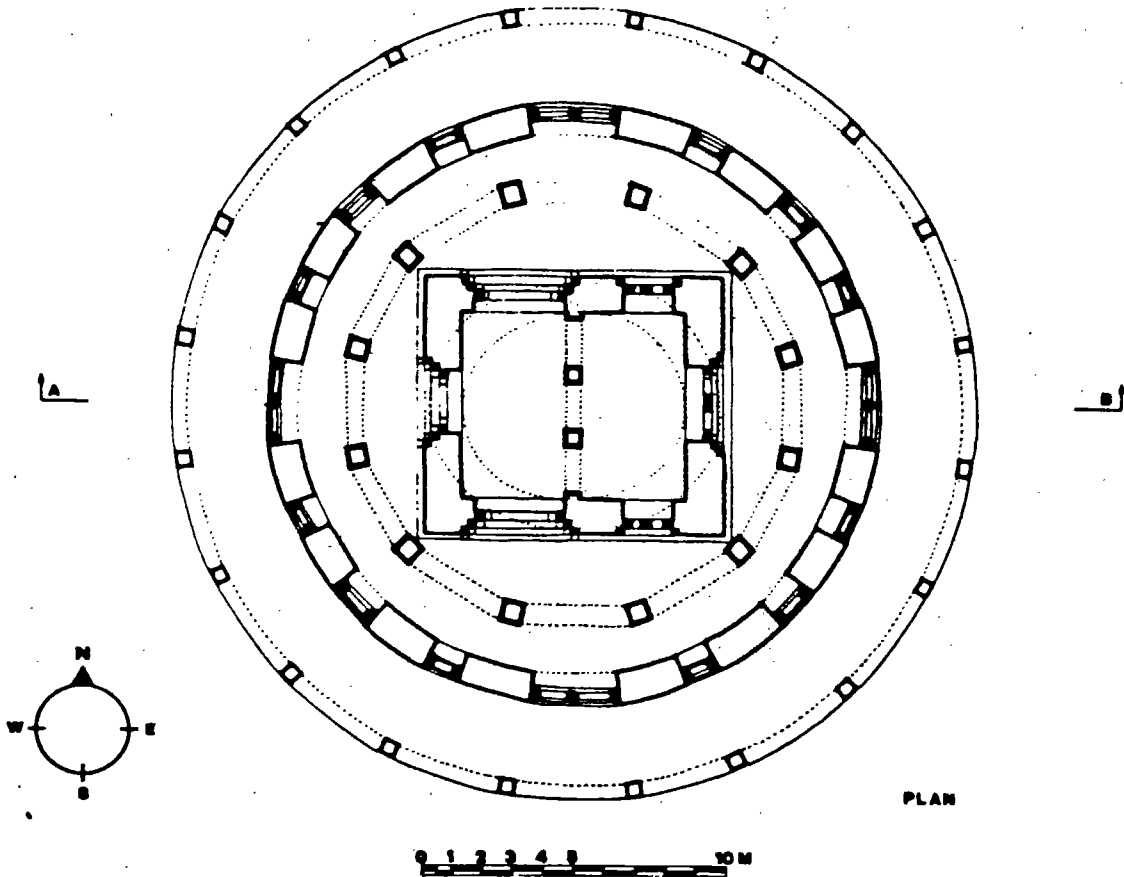
- | | |
|-------------------------------|---------------------------|
| 1 DEBRA SINAI CHURCH, GORGORA | 17 KRISTOS SAMRA CHURCH |
| 2 BIRGIDA MARIAM CHURCH | 18 ISLAND OF CHERLA MANS |
| 3 MEDHANE ALEM MANENDABA | 19 TANA CHERKOS CHURCH |
| 4 MARIAM GHEMB, SUSINOUS | 20 MITSELE FASSILIDES CH. |
| 5 GORGORA CASTLE | 21 GEDAM KERATTA CHERKO |
| 6 GALILA ZAKARIOS CHURCH | 22 MEDHANE ALEM, REMA |
| 7 METRAHA CHURCH | 23 DAGA ISTAFANOS CHURC |
| 8 BARIE GHEMB MIKRAEL CH. | 24 ARSIMA SEMATAT CHUR |
| 9 AGRHA ASBHA CASTLE | 25 NARGA SELASSIE CHUR |
| 10 COGGA LIDETTA CHURCH | 26 URE KIDANE MERET CHUR |
| 11 GARNO RIVER BRIDGE | 27 KEBRAN GABRIEL CHURCH |
| 12 GUZARA CASTLE | 28 ISLAND OF ENTONS |
| 13 SENDABA YESSOUS CHURCH | 29 DEBCE MARIAM CHURCH |
| 14 WASHA ANDREAS CHURCH | 30 BRIDGE OVER BIG ABBAI |
| 15 TEGLA HAIMANET CHURCH | |
| 16 TARAG HEDAM MARIAM CH. | |

Figure 12: Map of Lake Tana with location of major monuments and sites

JUNE 84, E.A.A.



SECTION A-B



PLAN

Figure 13: Plan and section of Biet Kebran Gabriel, Lake Tana (drawing by Sandro Angelini)

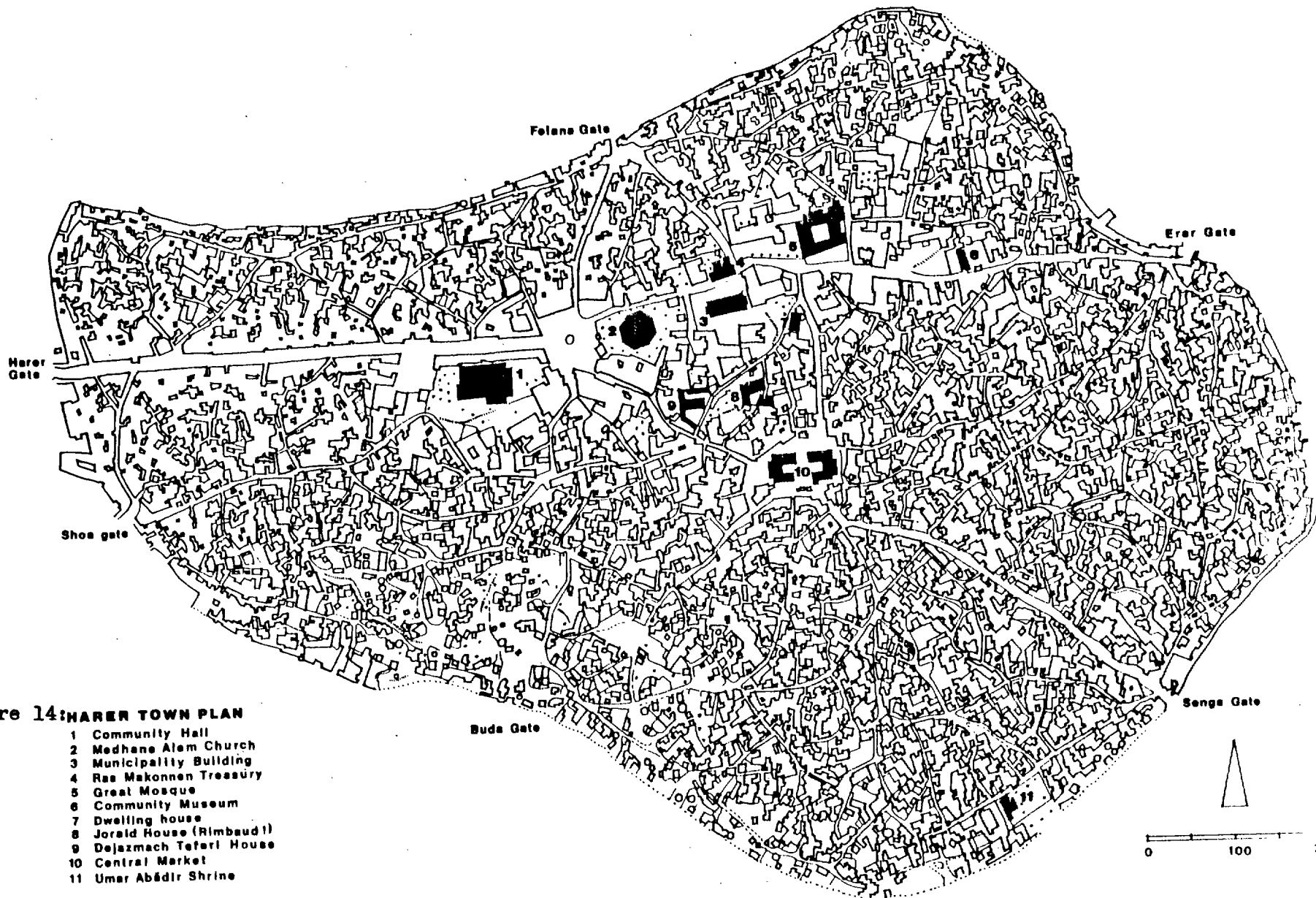
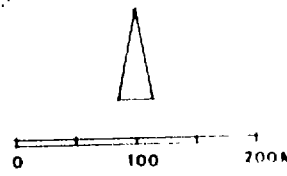


Figure 14: HARER TOWN PLAN

- 1 Community Hall
- 2 Medhane Alem Church
- 3 Municipality Building
- 4 Ras Makonnen Treasury
- 5 Great Mosque
- 6 Community Museum
- 7 Dwelling house
- 8 Jorsid House (Rimbaud)
- 9 Dejazmach Teteri House
- 10 Central Market
- 11 Umar Abädür Shrine



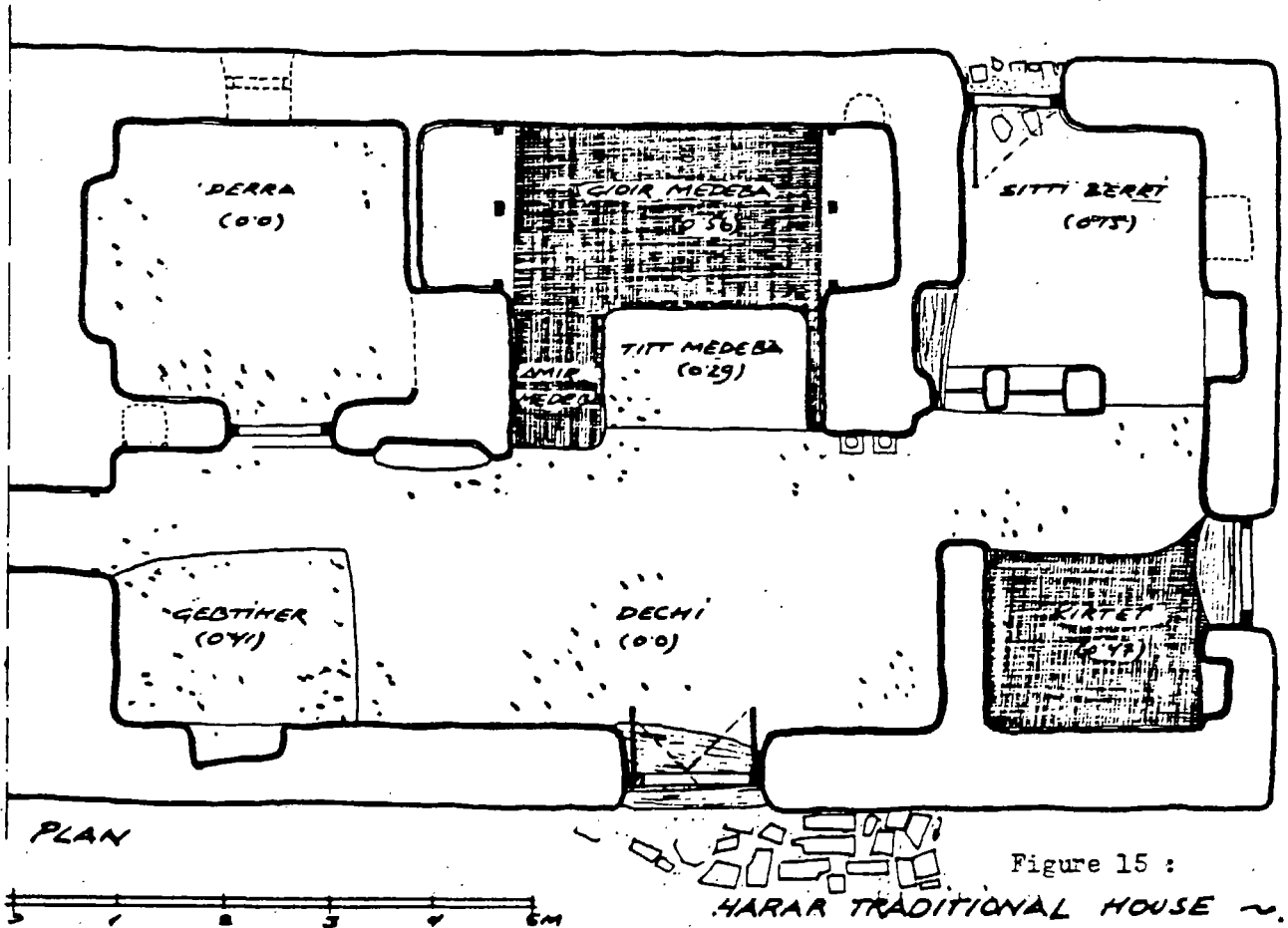
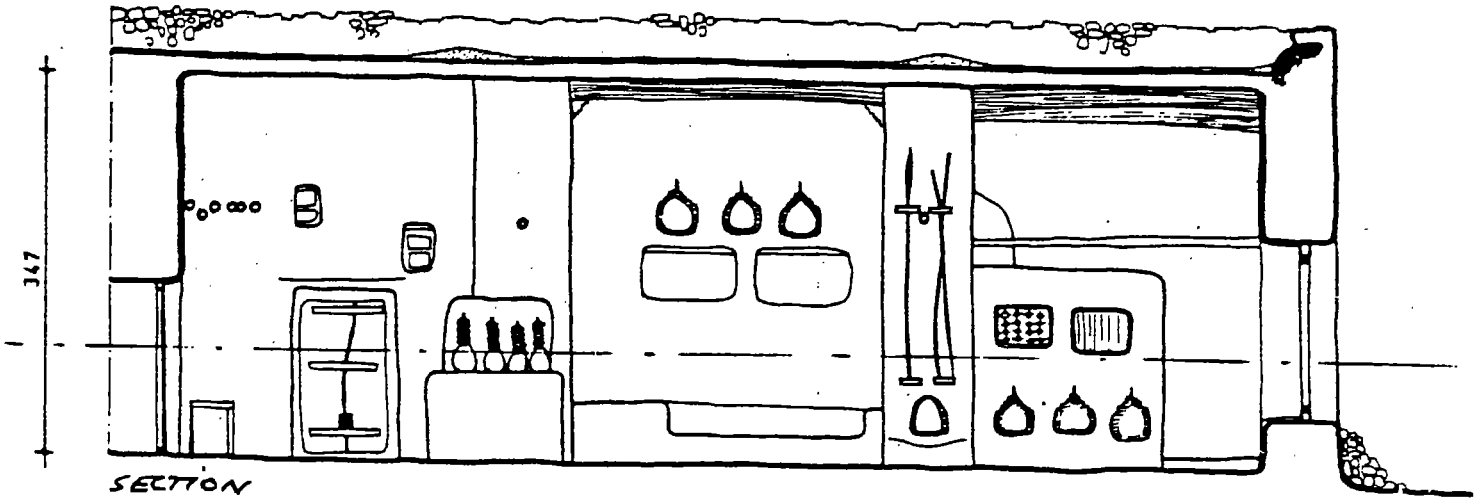
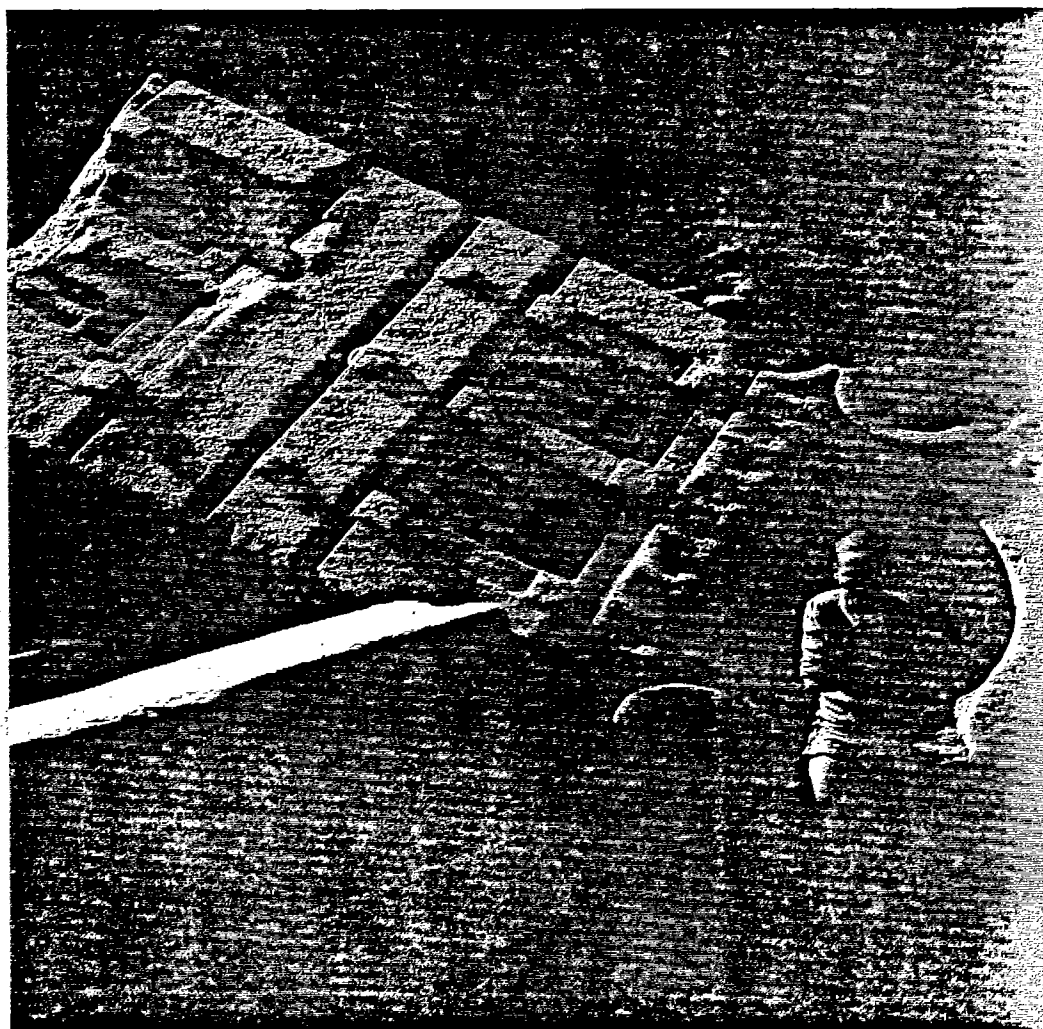
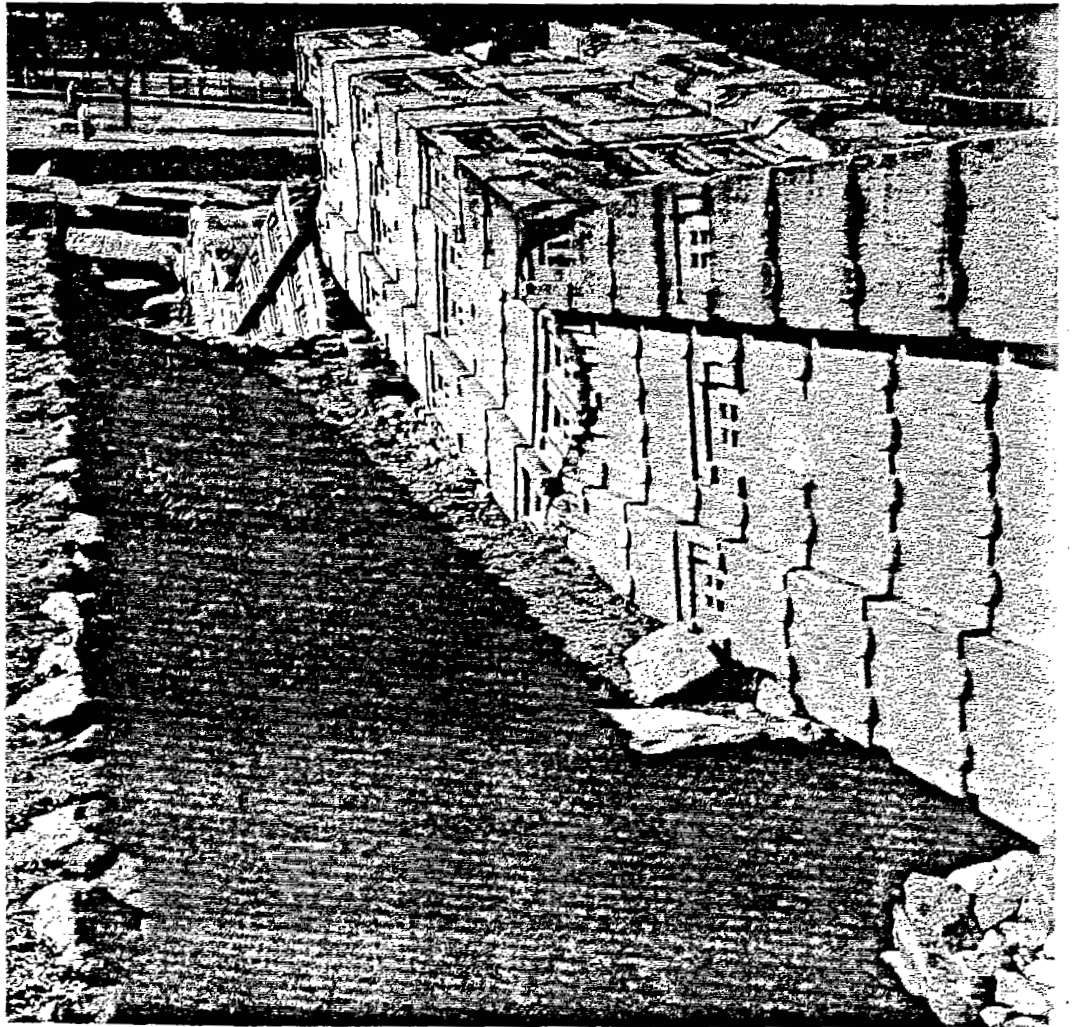


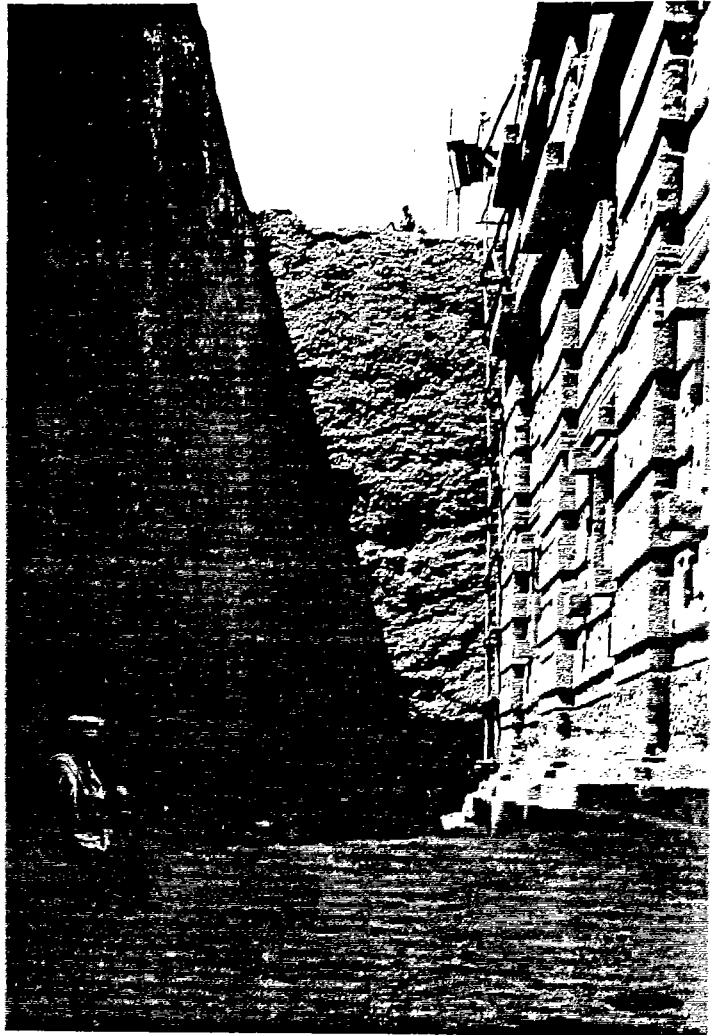
Figure 15 :
HARAR TRADITIONAL HOUSE ~.



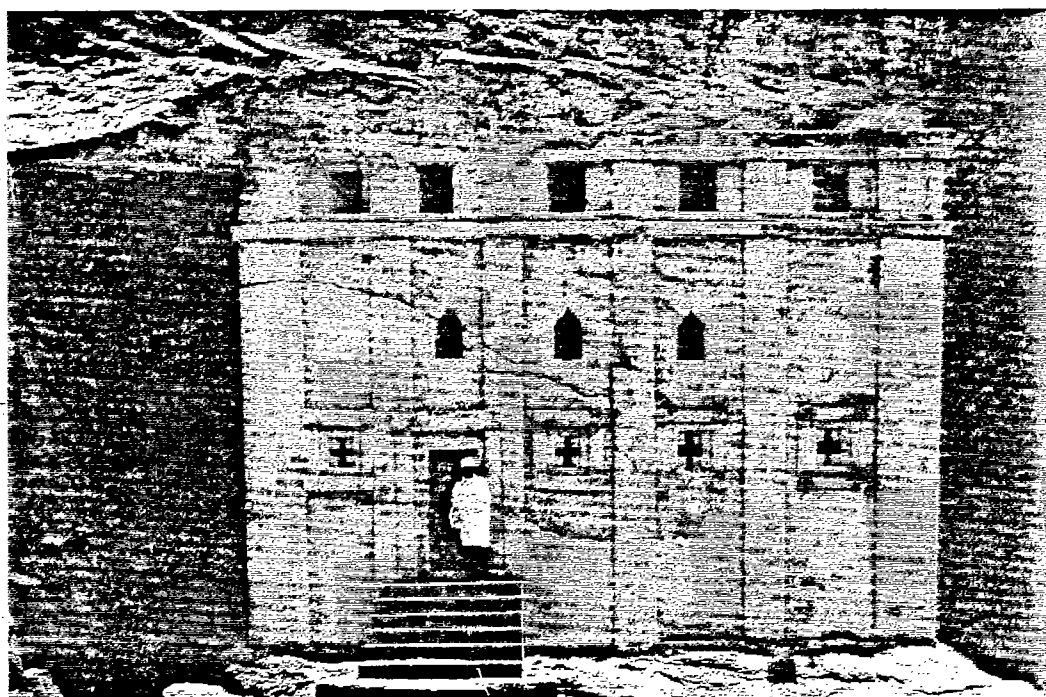
SCULPTURED STELE LAYING IN THE RIVER BED OF MAJ HEJJA, AKSUM



THE "GIANT FALLEN STELE", AKSUM



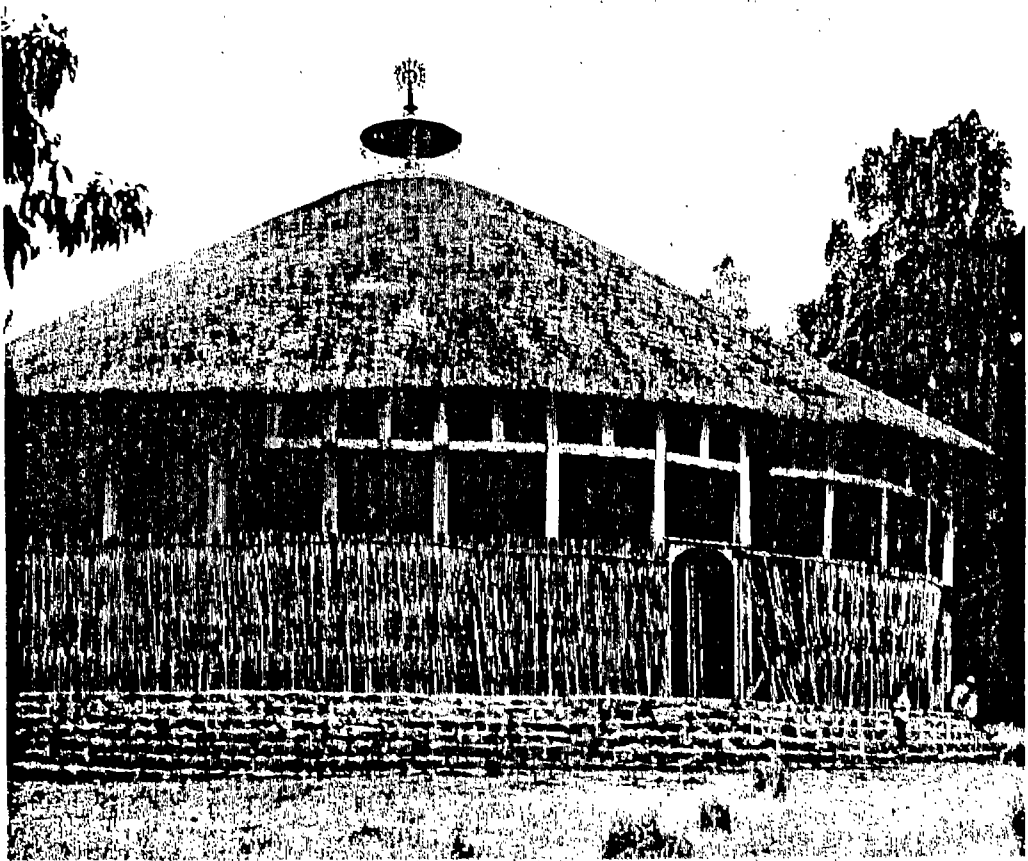
BIET EMANUEL CHURCH, LALIBELA



MAIN FACADE OF BIET LIBANOS CHURCH, LALIBELA



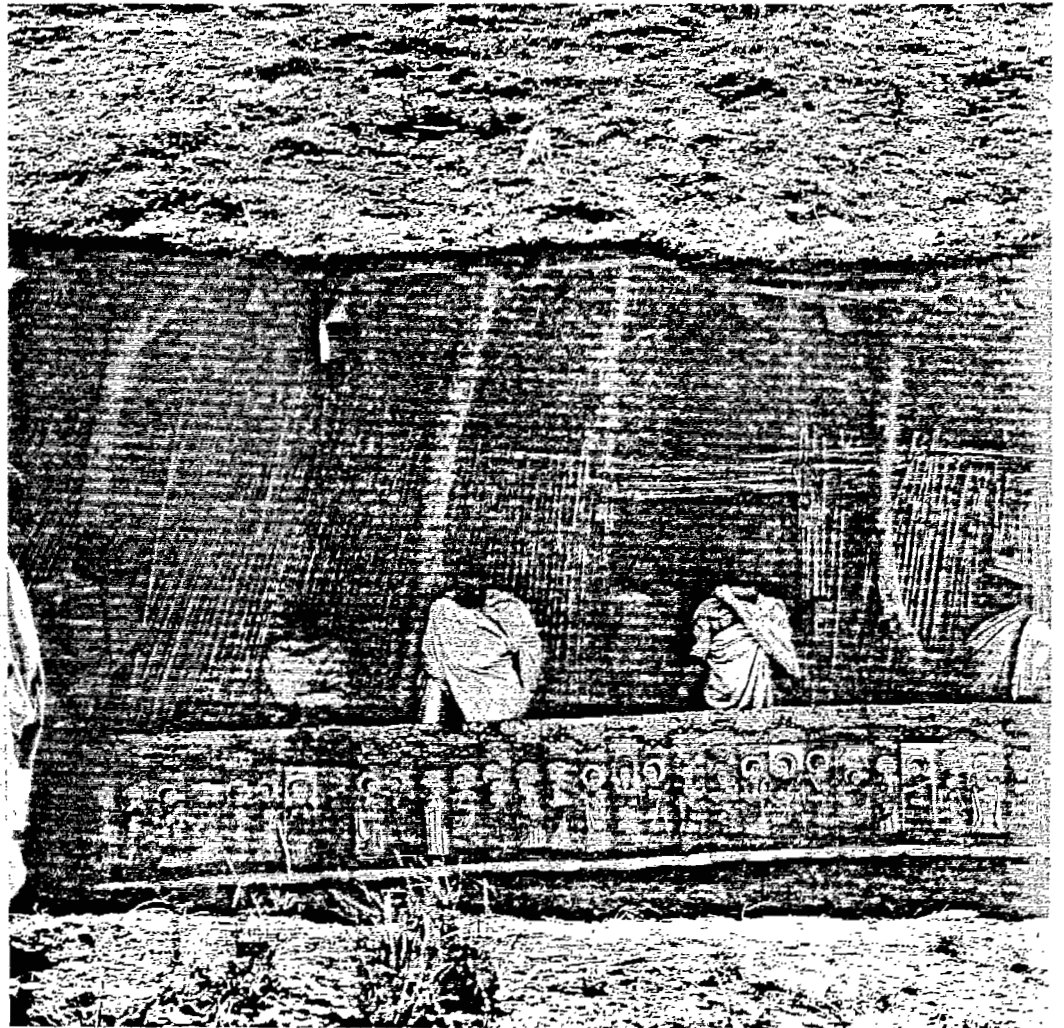
LALIBELA TRADITIONAL HOUSING



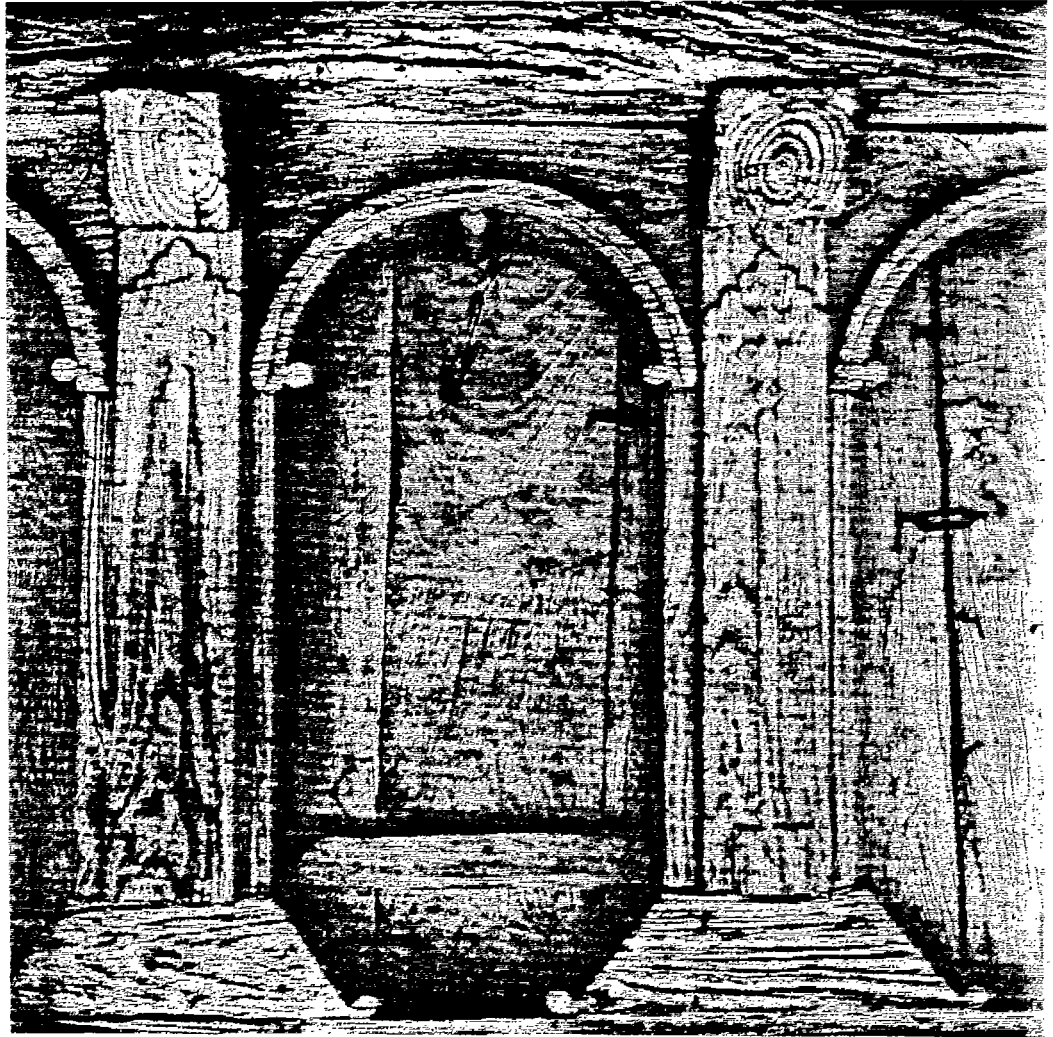
URE KIDANE MERET CHURCH, ZEGHTE, LAKE TANZA



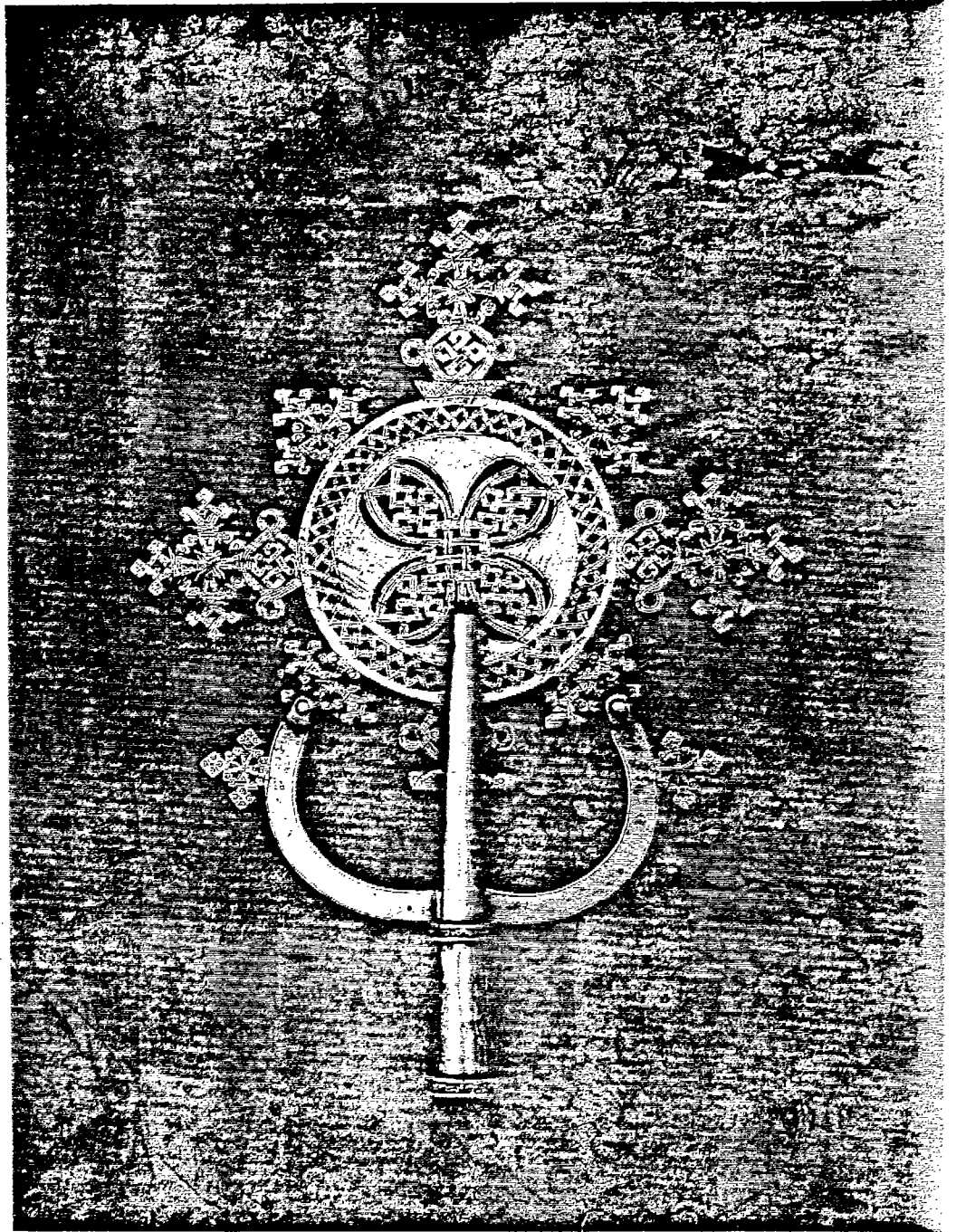
MURAL PAINTINGS, URE KIDANE MERET CHURCH, ZEGHIE, LAKE TANA



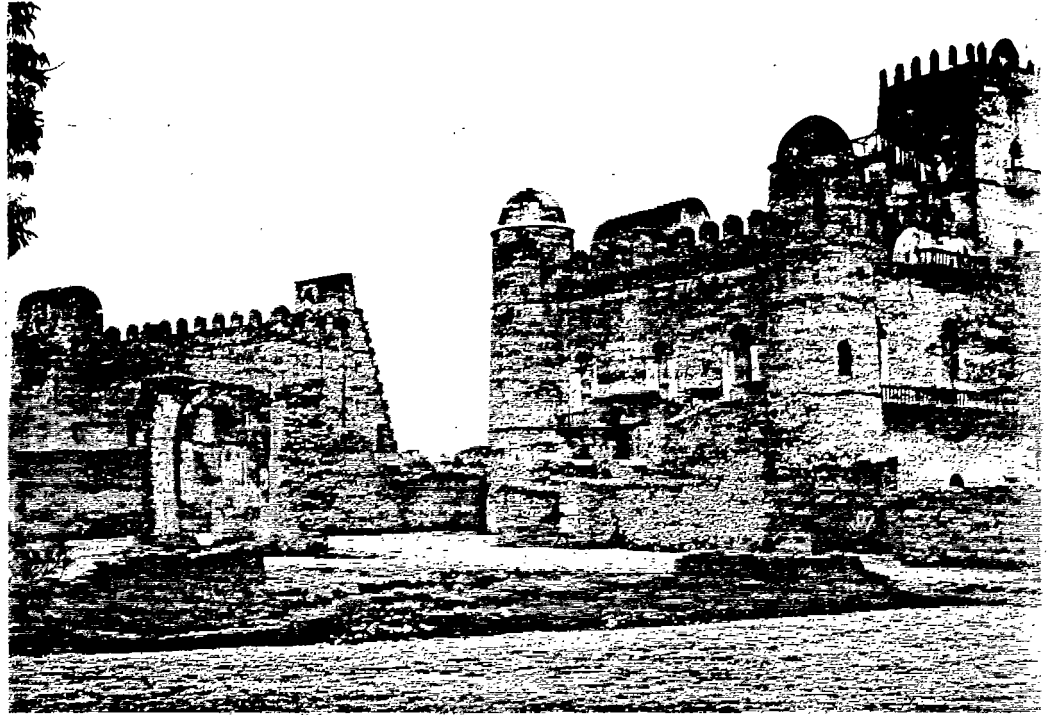
THE CHURCH OF TANA CHERKOS AND THE "FOLDING BOOK", LAKE TANA



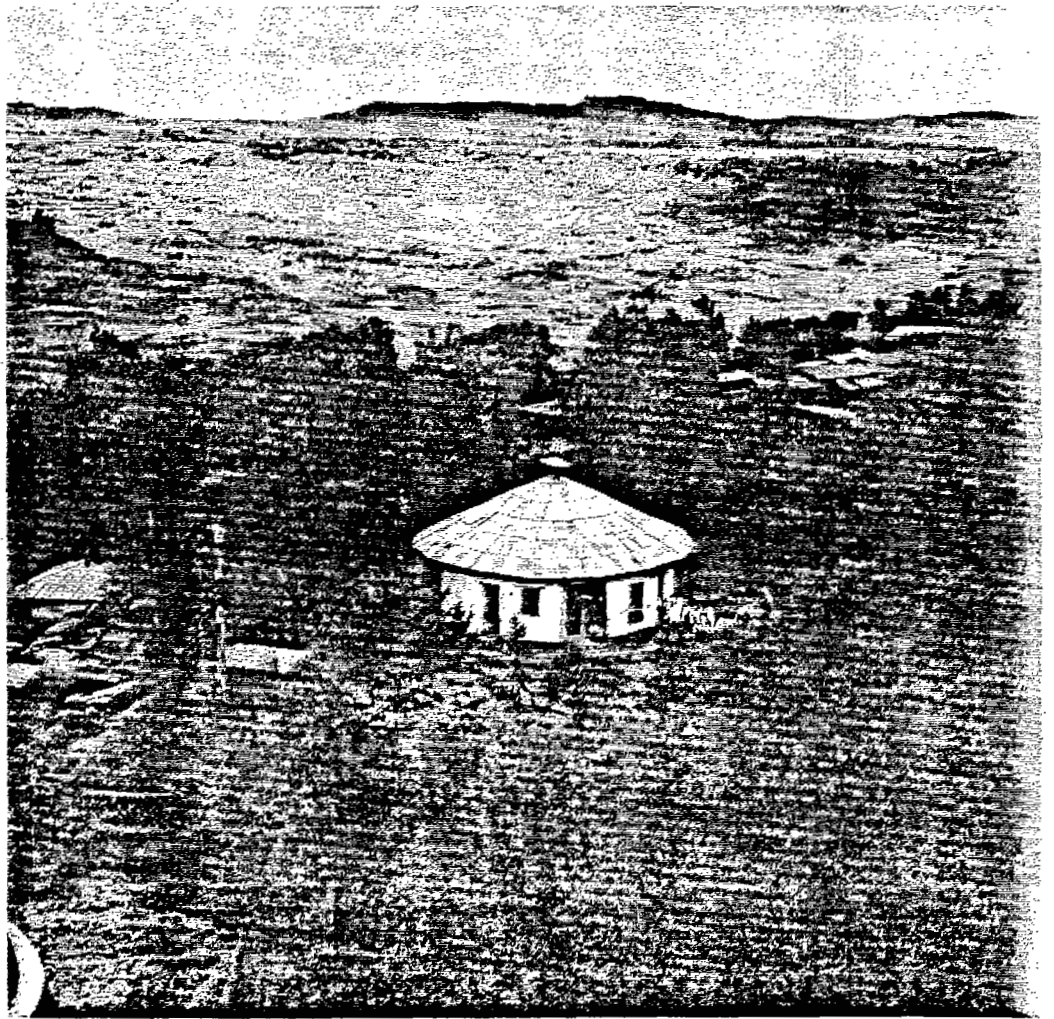
DETAIL OF CARVED WOOD WINDOW, TANA CHERKOS CHURCH, LAKE TANA



PROCESSIONAL CROSS FROM NAGHA SELASSIE CHURCH, LAKE TANA



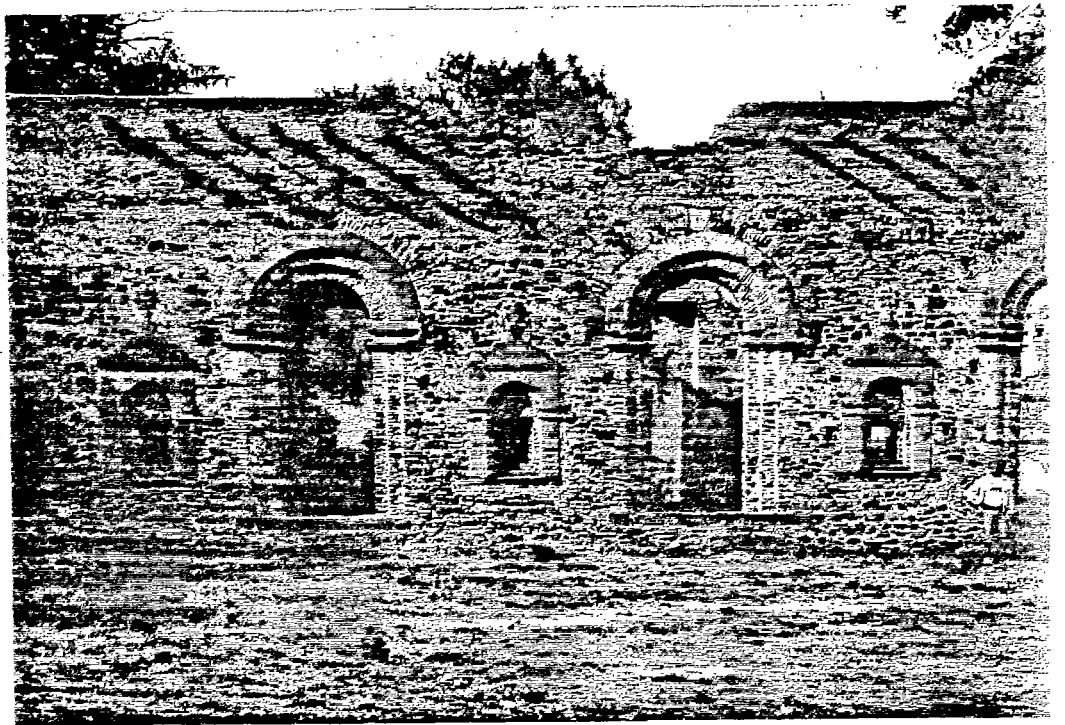
FASILIDES CASTLES, FASIL GEEBBI, GONDAR



TRADITIONAL ROUND CHURCH OUTSIDE FASIL GHEEBI, GONDAR



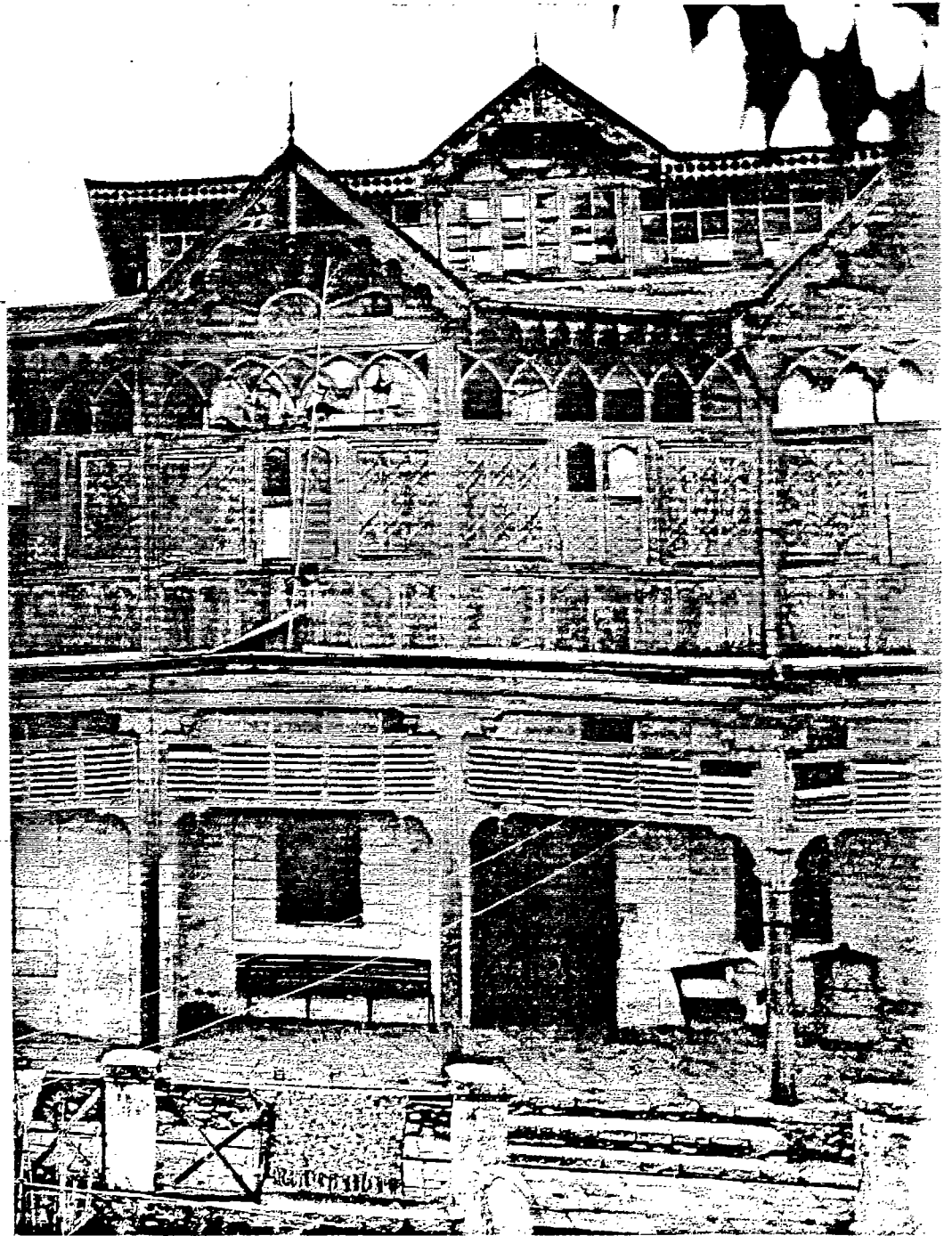
BATH OF FASSILIDES, GONDAR



CUSQUAM PALACE RUIN, CONDAR



WALLED ENCLOSURE IN FRONT OF UMAR ABADIR SHRINE, HARA



JORALD HOUSE (ASSOCIATED WITH THE LIFE OF HENRY RIMBAUD IN HARA)