THE NEW OXFORD ATLAS

PREPARED BY
THE CARTOGRAPHIC DEPARTMENT
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PREFACE

THE New Oxford Atlas is a development rather than a straightforward second edition of the Oxford Atlas first published in 1951. The distinguished editors of the Oxford Atlas, Brigadier Sir Clinton Lewis and Colonel J. D. Campbell, assisted by Mr. D. P. Bickmore of the Clarendon Press and Mr. Kenneth Cook of Messrs. Cook, Hammond & Kell, planned a coverage of topographic and thematic maps and a general style of mapping which have stood the test of time and which, in the opinion of the publishers, cannot be fundamentally improved upon in an atlas of the present scope.

Thus the New Oxford Atlas retains the basic arrangement of its predecessor. In particular it retains the scales, projections, sheet lines, and general colouring of its topographic maps, whilst incorporating complete revision of all information liable to change and a re-styling of certain elements of map design in the interests of greater clarity. Its thematic or special subject maps, which are particularly concerned with the basic aspects of physical geography and demography, incorporate the results of modern research and latest available information and are presented by newly-evolved cartographic techniques. The latter enable such aspects of physical geography as structure, relief, climate, and vegetation to be shown for all areas of the earth's surface at an unusually large, consistent scale. Furthermore all of these aspects are shown in direct relationship with each other and against a background of human geography. Since the vast subject of economic geography cannot be dealt with adequately in supplementary maps, the reader is referred here to the companion Oxford Economic Atlas of the World.

The gazetteer has been completely revised in conjunction with the maps and has been reset. Again, the practical principles of construction used in the Oxford Atlas gazetteer have been largely continued.

Whilst accepting full responsibility for the content of the New Oxford Atlas the publishers gratefully acknowledge the advice and assistance of many individuals and organizations in its preparation. Furthermore they hope that the generous and helpful comments and criticisms which have often been received in the past from the many users of the Oxford Atlas will continue in respect of its successor.

Contents

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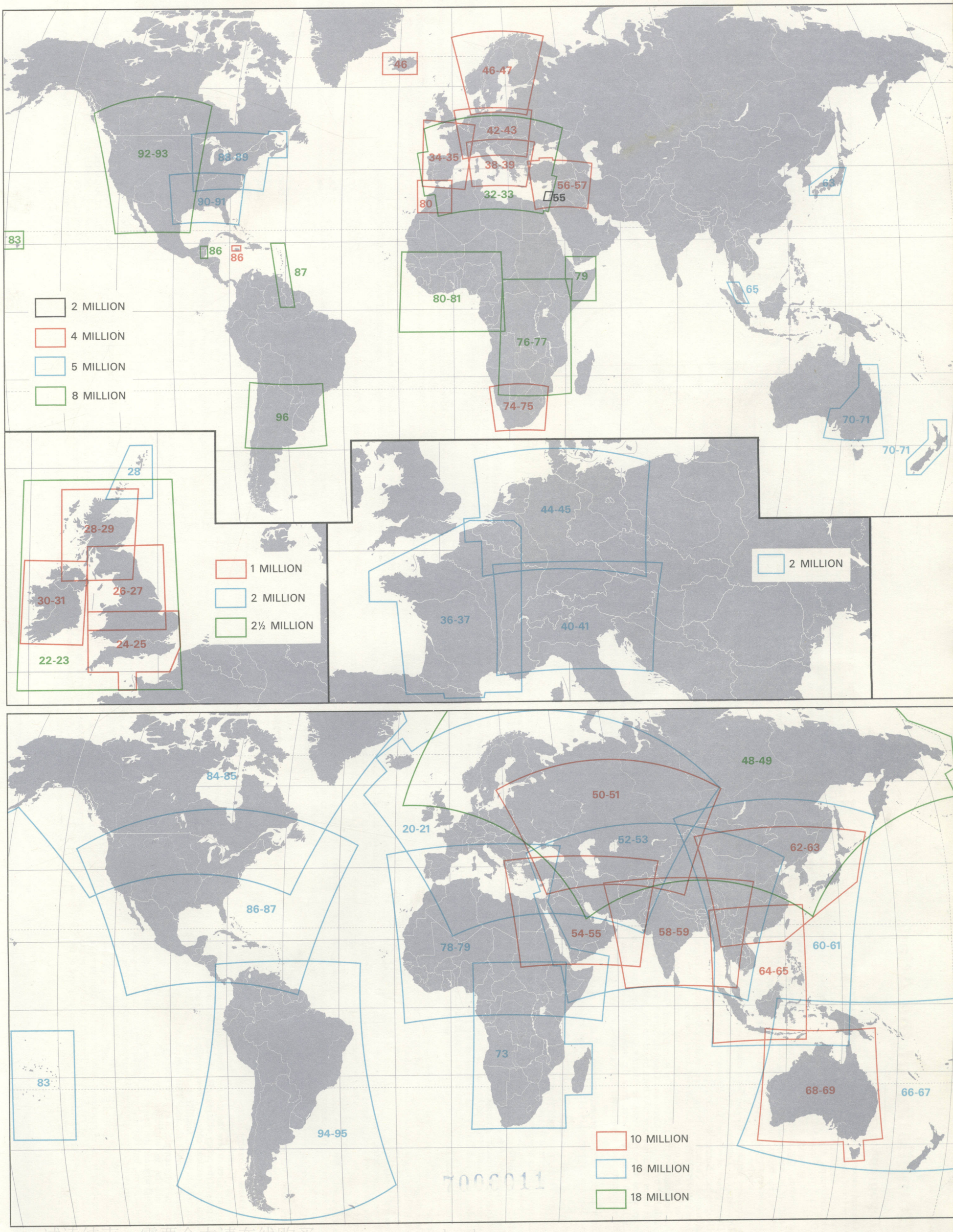

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Compilation of the Atlas

Topographic maps

General sources The topography of the atlas has been taken from maps published mainly by British and American official and non-official bodies and at considerably larger scales than those of the atlas maps. A list of the principal maps used is given in The Oxford Atlas, First edition, page 8.

For the selection and grading of towns, the boundaries of subdivisions, the classification of communications, and other details of human geography, the most recent maps, census reports, official year-books, and other publications of the countries, and territories concerned have been consulted. The list of these is too long to include.

Frequent recourse has also been made to the following - U.N. Demographic Yearbook, Unesco Liste des Parcs Nationaux, U.S. Department of State International Boundary Studies and Geographic Notes, The Statesman's Year-Book, Whitaker's Almanack, Cartactual Map Service, Philip's Geographical Digest, Jane's World Railways, ABC World Airways Guide.

For the relief, on maps whose scale is 1:8M or smaller, great use has been made of the 1:5M series of *Aeronautical Planning Charts* published by the U.S. Coast and Geodetic Survey. For the larger scale maps relief has generally been based on the principal source maps noted above. Bathymetric information has been taken from the British Admiralty charts, from the International Hydrographic Bureau charts, and from recent hydrographic surveys.

Projections Notes on projections used and details of scale errors will be found at pages 114-115 to which the reader is referred.

Distances, areas and scales On each map there are figures in the borders. Those on the right show the area in square miles of each quadrilateral formed by the graticule. Those on the left show the distance in miles along each parallel of latitude (E.-W.) between two successive meridians. These enable areas to be estimated and the scale errors in different parts of the maps to be assessed (*see* p. 115). Comparisons of areas and distances are further facilitated by the arrangement of scales of most of the maps in a uniform sequence and at simple multiples of each other, i.e. 1:1M, 1:2M, 1:4M, 1:8M, 1:16M, 1:5M and 1:10M are substituted for 1:4M and 1:8M in certain cases, and some other variations in scale have been made, to enable particular regions or countries to be shown in one map.

Relief Actual contour lines have been omitted over most areas since they interfere with the smooth gradation of the layers and with the legibility of the lettering. The junctions of the layer tints in fact constitute contour lines. Faint blue contour lines have been inserted however between the two lowest land layers (green tints), and between bathymetric layers to enhance distinction.

For obvious reasons it is not desirable to adopt entirely uniform layer intervals (e.g. one particular tint representing the same range of altitude throughout the atlas). For each sequence of maps the layer intervals have been selected so as to show up the major physical features of the country or continent to the best advantage. In no case, however, does the light green tint extend above the 1,000 feet (305 metres) level.

Metrication Values of altitude layers are shown throughout in feet and metric equivalents whereas spotheights are in metres only. Scale-bars are, in most cases, graduated in miles and kilometres.

Place-names Country names have been given in their English forms, e.g. Germany, not Deutschland. Province and regional names are given, where they are well known, in their English form.

In general the policy with regards to foreign town names has been guided by practical considerations; versions have been employed which will be most familiar to readers of English language newspapers, periodicals, etc. This undoubtedly leads to inconsistencies. For example, in any one country the names of prominent towns will be in anglicized forms (e.g. Tripoli rather than Tarabulus) whereas the names of smaller places will be in locally accepted forms, but this is thought preferable to a thorough-going vernacularization of place-names. Where names have been officially changed however, e.g. in Central Africa or Tibet, the new names have of course been used. In Europe, and occasionally elsewhere, the vernacular forms of prominent place-names have been given in brackets, e.g. Vienna (Wien), Florence (Firenze). In Belgium where most towns have both Flemish and Walloon names only one of the official names has been given on the map.

For countries using non-Roman scripts, with the exception of China, transliterations have been based mainly on the practices of the British Permanent Committee on Geographical Names and the U.S. Board of Geographic Names. In China the familiar forms of the Chinese Post Office system have been used for larger towns whilst new names have been romanized according to the Wade-Giles system.

Geographical terms such as Lake, Island, Cape, Mountain, etc. except when they form part of the proper name, have generally been given in English instead of in the local terms: in certain cases, however, it is undesirable or impossible to translate the local term, e.g. Étang de Berre, Sierra Nevada, Cordillera Occidental, Rio Grande. All names, other than town or village names, are given topographic explanation in the Gazetteer, e.g. Garonne: *riv.*, France.

The grading of town names and of town sites is based on the population and relative importance of the town (as obtained from the most recent census reports). A grading worked out solely on the basis of comparative population would have certain disadvantages. For example, in the map of the Middle East (pages 56-7) towns of comparatively small population in Turkey have a significance as great as many places of far larger population in the Nile delta. Thus a regional and not a worldwide basis for classification has been adopted, and extra emphasis is usually given where the town is an administrative capital or has some other special importance.

Users may find it of value to consult the map of World Population: Distribution and Growth (page 103) on which all towns of more than 100,000 inhabitants have been plotted by a series of graded circles.

Boundaries Since it is believed that the responsibility of the cartographer is to record geographical facts rather than opinions, the atlas aims to present only *de facto* situations and to take no side in arguments as to the political status of areas or boundaries. The latter may be said to indicate on the map change of authority on the ground. Major disputed boundaries have been separately shown, also cease-fire lines in the Middle and Far East. Internal boundaries are shown where information exists and scales permit.

Communications Railways are shown by black lines: gauges are distinguished where relevant. In Europe (except U.K.), North America, and other developed areas a system of main lines only has been shown.

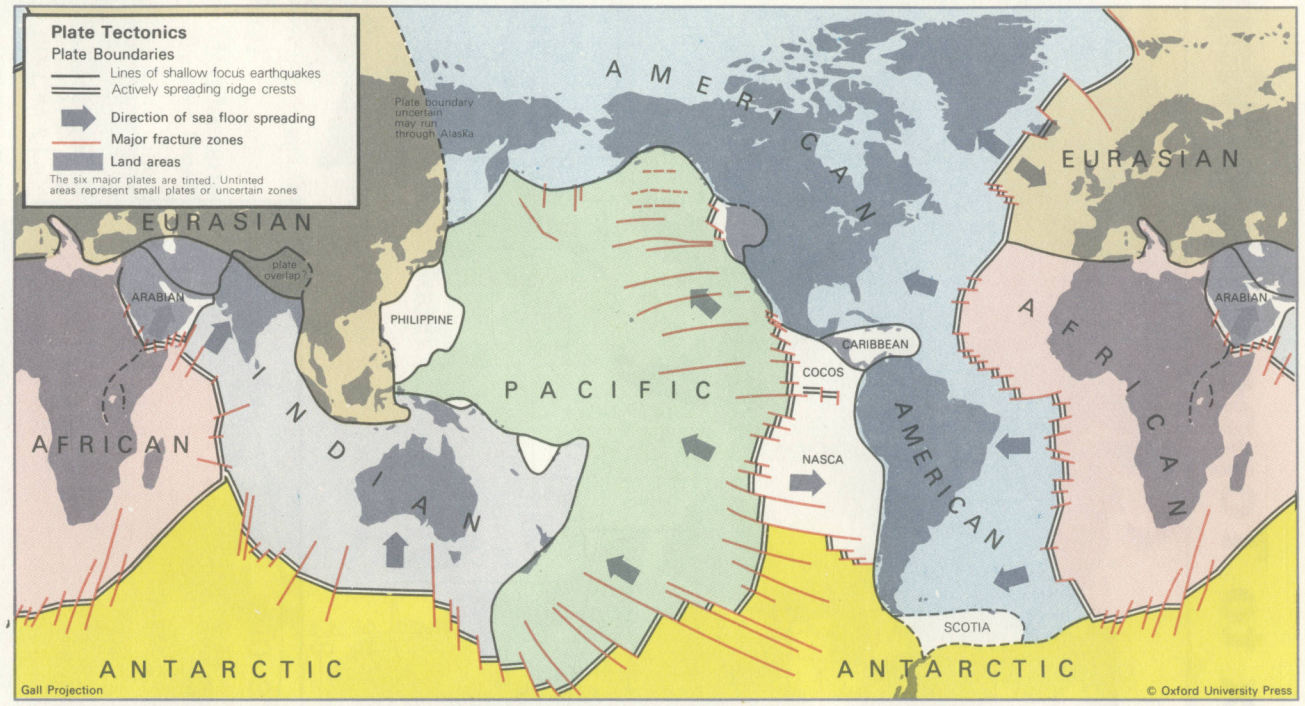
Roads are shown in red. Again, in developed areas it has been possible to show only a selection of main roads. Elsewhere selection and classification have been on the basis of regional importance rather than the physical characteristics of roads. Limited access roads ("motorways") are separately shown; main pack routes are shown where they form the only means of communication.

Gazetteer This has been compiled by listing all names on the maps. (References are to the 'squares' formed by the lines of latitude and longitude.) Please see page 116 for further details.

Thematic maps - sources

Oxford Economic Atlas of the World, 4th. Edition, Oxford University Press, London, 1972.
Oxford World Atlas, Oxford University Press, London, 1973.
The Atlas of Britain and Northern Ireland, Clarendon Press, 1963.
Census 1961, 1971 Great Britain and Northern Ireland (County Reports), H.M.S.O.
O.S. Administrative Areas maps, 1973, 1974.
Tectonic Map of Great Britain and Northern Ireland, The Institute of Geological Sciences, 1966.
O.S. 1:250,000 Fifth Series.
The Countryside Commission, Cambridge Gate, Regent's Park, London.
Climatic maps and graphs of U.K. are based on Crown copyright Meteorological Office maps and statistics used with the permission of the Controller of Her Majesty's Stationery Office.
The advice of Professor K. M. Clayton, University of East Anglia, in connection with the map of Superficial Deposits is gratefully acknowledged. The inset to the main map is adapted from a map in B. W. Sparks & R. G. West, The Ice Age in Britain, Methuen, London, 1972, by permission of the authors.

Ocean maps (pages 7-9)



The map above illustrates the distribution — sometimes hypothetical — of the geotectonic plates with which are associated the mid-ocean ridges, compression belts, and unstable areas shown on the ocean maps.

On these maps, and also on those at 1:25 million, a new series of altitude layer colours has been devised in which the value (strength) of the colours increases uniformly with height as the hues pass from yellow through buff to red. A three-dimensional effect is produced by a light blue hillshading pattern.

The chief fishing areas of the world are indicated by naming the main types of fish caught in each area, as measured by catch.

The circulation of ocean currents is shown in a generalized way.

Explanation of symbols used on Ocean maps

Geotectonics

- Rifted zones on land and 'mid-ocean ridges' in the sea along the axis of which the predominant movement of the lithosphere is outwards
- Compression belts: land and ocean areas along the axis of which the predominant movement of the lithosphere is inwards
- Faults: important scarp-forming faults and rift valley sides
- Unstable areas
- Andesite line distinguishing the primarily andesitic circum-Pacific volcanoes from the primarily basaltic oceanic volcanoes, also coinciding over large distances with the boundary of the Pacific geotectonic plate
- Volcanoes active in historic time

Ocean currents

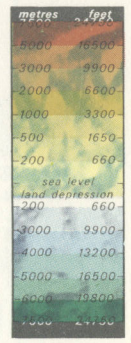
- Size of arrow indicates importance or strength of current
- JULY — Seasonality is indicated by the name of the month in which the current is strongest
- Warm currents
- Cold currents
- Convergences: zones along which currents converge and descend
- Divergences: zones along which currents upwell and diverge
- JULY / JAN. — The seasonal migration of convergences and divergences is shown by drawing two lines, representing their extreme positions in the months indicated

Other information

- Sea Ice — Perennially unnavigable
- Seasonally or perennially navigable. The extent of sea ice may vary widely from year to year

Relief

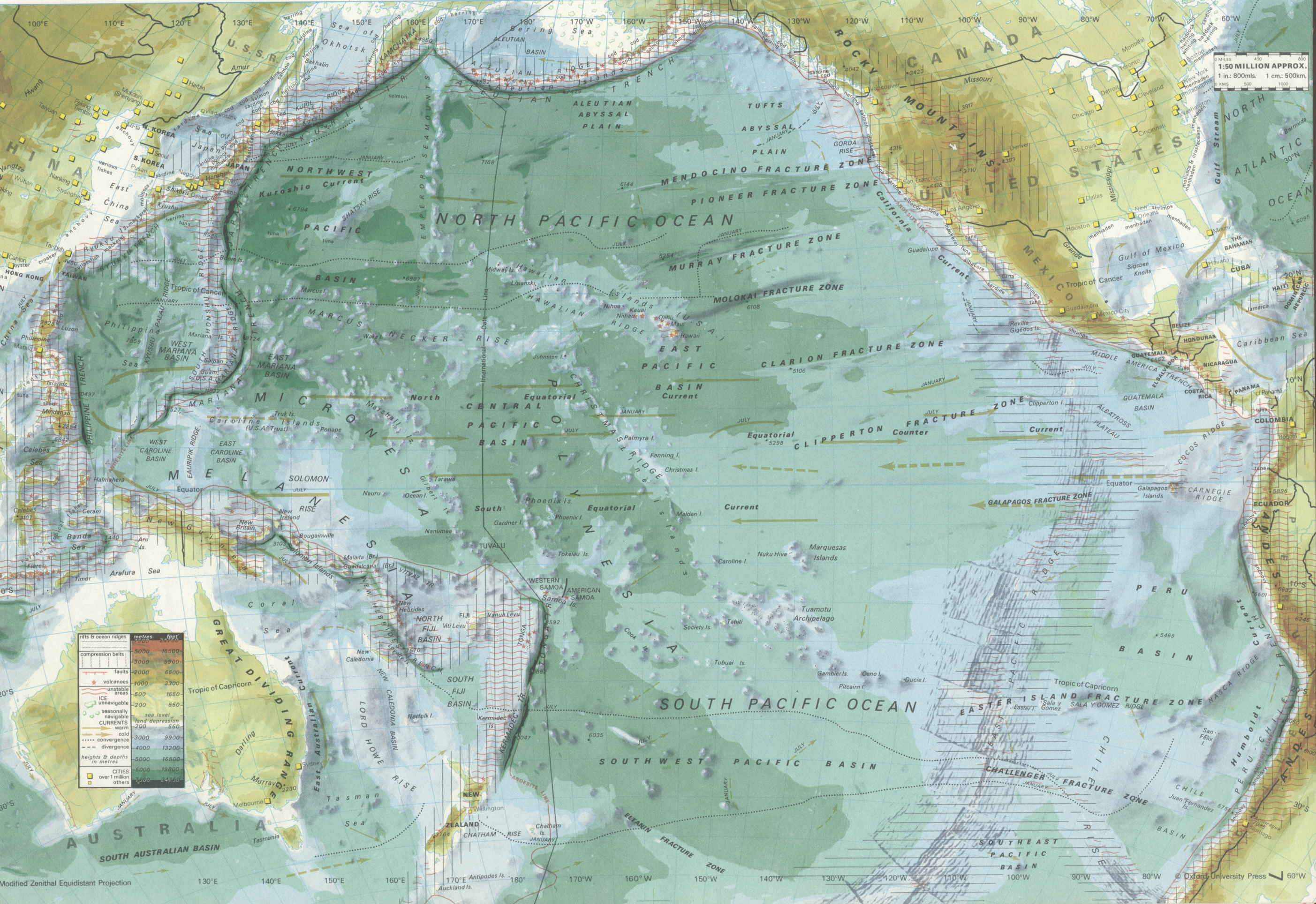
- Icecaps
- Seasonal rivers
- International boundaries
- Very small isolated islands
- Cities with over 1 million inhabitants
- Selected other cities



Heights and depths in metres

Sources

National Institute of Oceanography, Wormley, Surrey
The Oxford Atlas, Oxford University Press, London, 1970
Fiziko-Geografičeskij Atlas Mira, Academy of Sciences USSR, Moskva, 1964
Jorgsen Frimodt, Scandinavian Fishing Year Book, København, 1967


1:50 MILLION APPROX.
1 in.: 800mls. 1 cm.: 500km.
rifts & ocean ridges
compression belts
faults
volcanoes
unstable areas
ICE unnavigable
seasonally navigable
CURRENTS warm
cold
convergence
divergence
heights & depths in metres
CITIES over 1 million
others
metres
feet
sea level
land depression
Modified Zenithal Equidistant Projection
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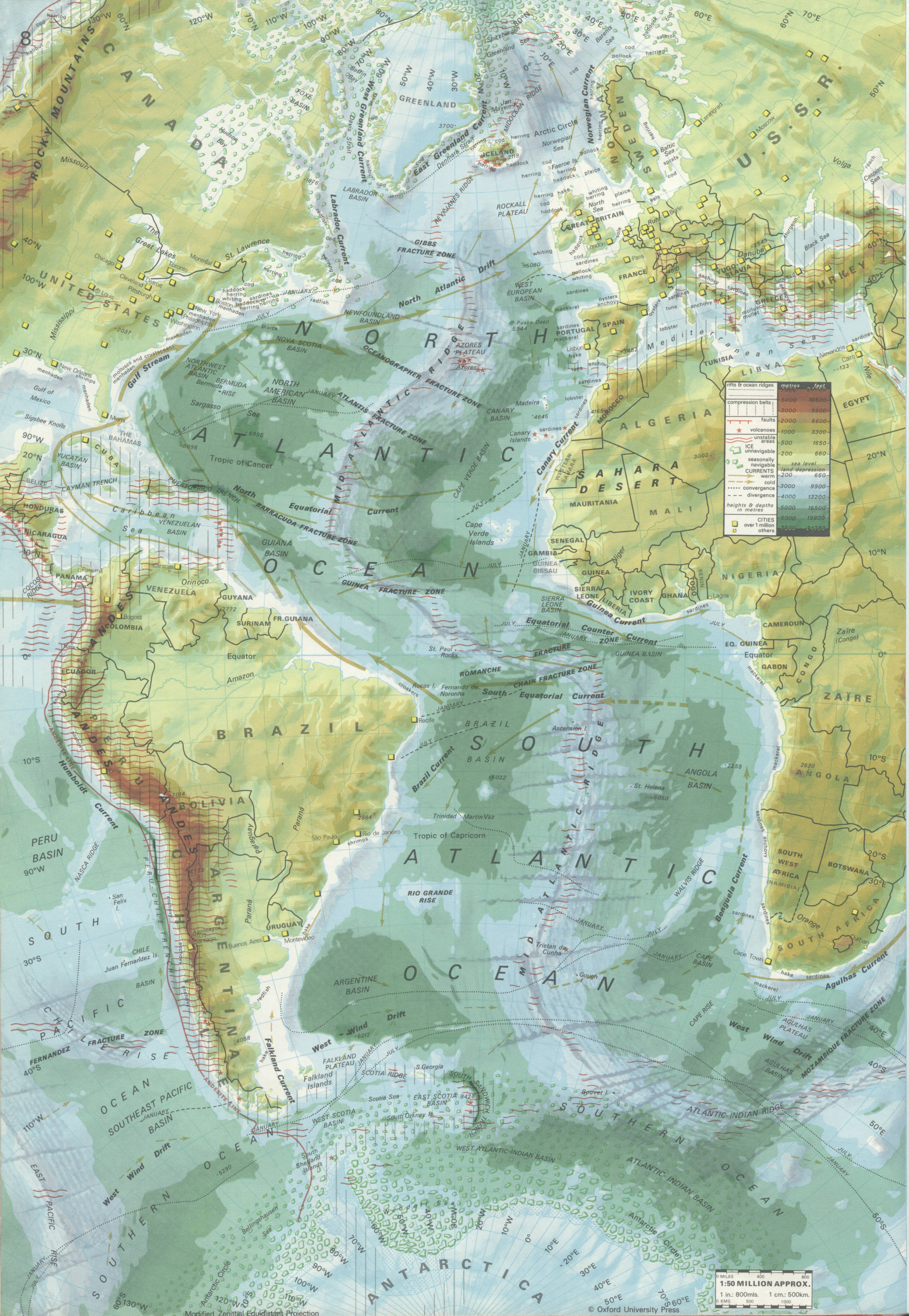

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folded belts
ancient platforms
volcanic
736 ice surface spot height
1480 ice thickness
2000 ice surface contour
nunataks
glaciers
SEA ICE unnavigable seasonally navigable
02 CLIMATE (see page 10)
volcanoes
research station
heights in metres

sub-glacial relief

feet	metres
9900	3000
8250	2500
6600	2000
4950	1500
3300	1000
1650	500
0 sea level	0
landlocked depr.	

shelf S.L. sea land

feet	metres
0	0
600	200
9900	3000
13200	4000
16500	5000
19800	6000
24750	7500

0 MILES 100 200 300 400 500
1 : 25 MILLION APPROX.
1 inch:400 miles 1 cm.:250 km.
0 KMS. 200 400 600 800

110°W 100°W 90°W 80°W 70°W 60°W 50°W 40°W 30°W 20°W 10°W 0 10°E 20°E 30°E 40°E 50°E 60°E 70°E 80°E 90°E 100°E 110°E 120°E 130°E 140°E 150°E 160°W 170°W 180° International Date Line

60°S 70°S 80°S

Southeast Pacific Basin
SOUTHERN OCEAN
Antarctic Circle
Cape Horn
SOUTH AMERICA
Drake Passage
West Scotia Basin
average maximum extent of pack ice
South Shetland Islands
(Chile) General Bernardo O'Higgins
(U.S.A.) Palmer Station
(Arg.) Almirante Brown
(Arg.) Almirante Irizar
(Br.) Argentine Islands
Biscoe Is.
(Br.) Adelaide
(Br.) Stonington Island
President Frei (Chile)
Bellingshausen (U.S.S.R.)
Capitan Arturo Prat (Chile)
Capitan Arturo Parodi (Arg.)
Petrel (Arg.)
Esperanza (Arg.)
Vicecomodoro Marambio (Arg.)
Teniente Matienzo (Arg.)
(Br.) Signy Island
(Arg.) Orcadas
South Orkney Islands
ANTARCTIC PENINSULA
GRAHAM LAND
LARSEN ICE SHELF
PALMER LAND
ALEXANDER I. ISLAND
George VI Sound
Fossil Bluff (Br.)
Bellingshausen Sea
Thurston I.
Wright Peak 1510
ELLSWORTH LAND
Mt. Edward 2390
Mt. Sisne 3100
Amundsen Sea
Weddell Sea
Antarctic Circle
SENTINEL RANGE
1472 3410
1666 2885
RONNE ICE SHELF
HOLLICK-KENYON PLATEAU
FLOOD RANGE 2000
FORD RANGES
Mt. Wesson 3292
BYRD LAND
ROCKEFELLER PLATEAU
Byrd Station (U.S.A.)
Mt. Radlinski 2749
136 1480
BERKNER I.
FILCHNER ICE SHELF
General Belgrano (Arg.)
Halley Bay (Br.)
COATS LAND
PENSACOLA MOUNTAINS
Anderson Summit 7812
Mt. Schopf 2990
643 1463
Reedy Gl.
Mt. Faraway
Shackleton Gl.
SHACKLETON RANGE
Recovery Gl.
Borg Massiv (S.A.)
QUEEN MAUD LAND
Sanae (S.Africa)
ROOSEVELT ISLAND
C.Colbeck
Ross Sea
ROSS ICE SHELF
SOUTH POLE
Amundsen-Scott (U.S.A.)
3007 2446
2714 1993
C.Adare
C.Hallett
(NZ) Scott Base
Mt. Terror 3262
Mt. Erebus 3743
McMurdo (U.S.A.) Station
McMurdo Sound
Ross I.
Mt. Markham 4351
Mt. Sidley 4285
TRANSANTARCTIC MTS.
VICTORIA LAND
2220 2996
2888 2610
2854 2593
4000
80°S
Vostok (U.S.S.R.)
Vertekaka Nunatak 3630
Novolazarevskaya (U.S.S.R.)
Dronning Maud Land
Dumont d'Urville (F.)
SOUTH MAGNETIC POLE (1971)
3000
2000
1000
3100 2730
2225 1475
Lambert Gl.
AMERY ICE SHELF
Mawson (Aust.)
Moldezhnaya (U.S.S.R.)
2350
Yalung Nunataks
70°S
WILKES LAND
Davis (Aust.)
C.Darnley
1674 1630
Mirny (U.S.S.R.)
Casey (Aust.)
WEST ICE SHELF
SHACKLETON ICE SHELF
average minimum extent of pack ice
02
12

30°E 40°E 50°E 60°E 70°E 80°E 90°E 100°E 110°E 120°E 130°E 140°E 150°E 160°E 170°E 180° International Date Line

30°N 20°N 10°N 0° 10°S 20°S 30°S 40°S 50°S 60°S 70°S

EGYPT
IRAQ
KUWAIT
IRAN
AFGHAN-ISTAN
PAKISTAN
CHINA
Tropic of Cancer
Persian Gulf
Red Sea
SAUDI ARABIA
QATAR
Gulf of Oman
OMAN
YEMEN
YEMEN P.D.R.
Aden
Arabian Sea
Himalayas
Mt. Everest 8848
Delhi
Ganges
Calcutta
BANGLA DESH
INDIA
Bombay
WESTERN GHATS
DECCAN
Bay of Bengal
BURMA
Irrawaddy
THAILAND
CAMBODIA
South China Sea
Nile
SUDAN
White Nile
ABYSSINIAN HIGHLANDS
ETHIOPIA
Southwest Monsoon Current
JULY
JAN.
ARABIAN BASIN
Laccadive Islands
Madras
Andaman Islands (Ind.)
ANDAMAN BASIN
Nicobar Islands (Ind.)
SRI LANKA
2524
MALAY PENINSULA
MALAYSIA
SINGAPORE
SUMATRA
INDONESIA
Jakarta
JAVA TRENCH
Christmas I.
Cocos Is.
COCOS BASIN
MALDIVES
CARLSBERG RIDGE
OWEN FRACTURE ZONE
SOMALI REP.
KENYA
Equator
Lake Victoria
Kilimanjaro 5895
Mombasa
Zanzibar
TANZANIA
SOMALI BASIN
SEYCHELLES
Amirante Is.
Aldabra Is.
COMORO IS.
L.Malawi
MALAWI
Zambezi
MOZAMBIQUE
Mozambique Channel
MASCARENE BASIN
MAURITIUS
CHAGOS LACCADIVE PLATEAU
MID-INDIAN RIDGE
I N D I A N
O C E A N
MID-INDIAN BASIN
South Equatorial Current
Rodriguez
Mauritius
RODRIGUEZ FRACTURE ZONE
Réunion 3069
MALAGASY REP.
2644
MADAGASCAR BASIN
6400
CENTRAL INDIAN RIDGE
NINETY EAST RIDGE
ZONE
Tropic of Capricorn
JANUARY
BROKEN RIDGE
WHARTON BASIN
WEST AUSTRALIAN BASIN
6459
AUSTRALIA
Perth
SOUTHEAST INDIAN BASIN
DIAMANTINA FRACTURE ZONE
Agulhas Current
Johannesburg
Durban
SOUTH AFRICA
3482
MOZAMBIQUE RIDGE
MADAGASCAR RIDGE
SOUTHWEST INDIAN RIDGE
SOUTHWEST INDIAN BASIN
5778
AMSTERDAM FRACTURE ZONE
St.Amsterdam
St.Paul (Fr.)
CROZET BASIN
5440
West Wind Drift
Crozet Is. (Fr.)
Prince Edward Is (S.A.)
AGULHAS BASIN
Kerguelen Is.(Fr.)
KERGUELEN PLATEAU
Heard Is. (Aust.)
6089
6972
6738
SOUTH INDIAN BASIN
SOUTH AUSTRALIAN BASIN
Antarctic Circle
A N T A R C T I C A
Modified Zenithal Equidistant Projection

0 MILES 400 800
1:50 MILLION APPROX.
1 in.: 800mls. 1 cm.: 500km.
0 KMS 500 1000

rifts & ocean ridges
compression belts
faults
volcanoes
unstable areas
ICE unnavigable
seasonally navigable
CURRENTS warm
cold
convergence
divergence
heights & depths in metres
CITIES over 1 million others

metres	feet
7000	23000
5000	16500
3000	9900
2000	6600
1000	3300
500	1650
200	660
sea level	
land depression	
200	660
3000	9900
4000	13200
5000	16500
6000	19800
7500	24750

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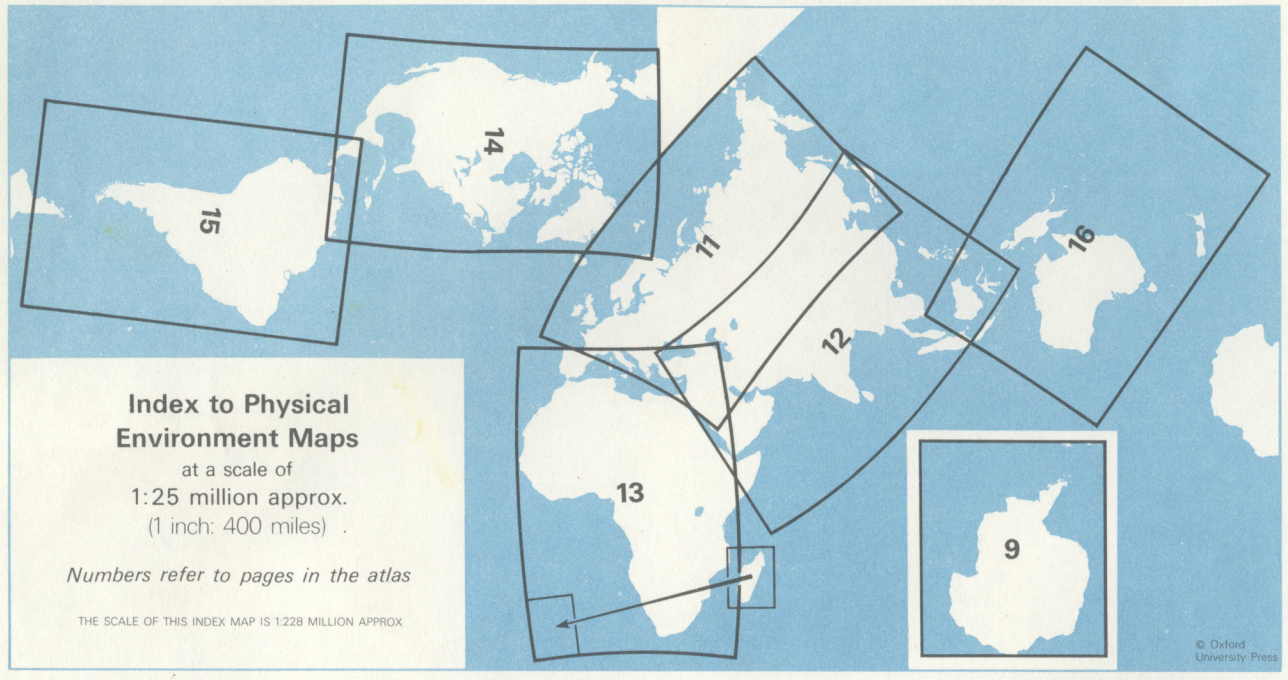
Physical Environment maps at approximately 1 : 25 million (pages 9-16)



The relationships of climate to relief and of relief to geology are rarely shown in map form. This series of maps which covers the whole land surface of the world employs the same altitude layer colouring as on the 1:50 million maps but combines it with a simplification of geological information and a new climatic classification. Those elements of geology and structure most relevant to relief forms have been selected and a simple five-category rock-type classification based on this relationship has been devised. The depiction of all active volcanoes and important scarp-forming faults links these maps with the ocean maps.

Seasonality as an alternative to temperature/rainfall as a basis for a world climatic classification was proposed by C. Troll (1958, 1964). The present classification by the late Professor D. L. Linton was devised as a modification of Troll's work with boundaries derived from actual isotherms and isohyets. The classification comprises two orders. The primary order forming the basis of the classification describes climate in terms of thermal conditions in the warmest month and the coldest month. Recognizing, with Köppen, that in middle and low latitudes lack of rain overrides considerations of temperature, a provision for arid and extremely arid climates is made. The secondary order of the classification recognizes that (a) in the middle latitudes, the seasonal range of temperature is significant, (b) in the tropics, the duration of wet and dry seasons is significant, and (c) certain areas of middle and low latitudes receive rainfall predominantly in winter (shown only on the world map). The extension of these categories over the oceans is one of the important features of this system of classification.

On the world map, the eleven main climatic types are given distinctive colours and two-digit numbers, and the secondary orders are shown by numbers and letters. On the maps at 1:25 million, the same data are shown in red outline form, with the areas identified by the key numbers and letters alone.

The map of the Antarctic on page 9 conforms to the 1:25 million series only in the depiction of climate, build (but in buff instead of grey), sea layers, sea ice and volcanoes. Special symbols and colours have been created to show the physical characteristics which are virtually confined to this continent. The altitude layers for the rock surface below the ice are shown in a grey/buff sequence while the continental ice surface itself is shown by means of fine black contour lines. The appearance is therefore of a transparent icecap through which may be seen the rock surface with its build characteristics below. Should the icecap be removed and no isostatic movement take place, the sea would flow into the areas coloured yellow, but not into the land-locked depressions coloured light green.

Explanation of symbols used on the Physical Environment maps

Seasonal Climate (See description of the classification above)

Boundaries between regions

First two digits: Characteristics of warmest and coldest seasons

- 02 No summer (below 6°C), cold winter (below 2°C)
- 12 Very cool summer (6°–10°C), cold winter (below 2°C)
- 11 Very cool summer (6°–10°C), mild winter (2°–13°C)
- 22 Cool summer (10°–20°C), cold winter (below 2°C)
- 21 Cool summer (10°–20°C), mild winter (2°–13°C)
- 20 Cool summer (10°–20°C), no winter (over 13°C)
- 32 Full summer (over 20°C), cold winter (below 2°C)
- 31 Full summer (over 20°C), mild winter (2°–13°C)
- 30 Full summer (over 20°C), no winter (over 13°C)
- X Arid (no month receives as much as 50 mm. rainfall)
- Z Extremely arid (no more than 2.5 mm monthly for at least 10 months)

Third digit: Seasonal temperature range

For areas 21, 22 and 32 outside the tropics

- 1 Oceanic: seasonal range less than 12C°
- 2 Sub-continental: seasonal range 12-24C°
- 3 Continental: seasonal range 24-36C°
- 4 Very continental: seasonal range 36-48C°
- 5 Extremely continental : seasonal range more than 48C°

Small letters: Duration of wet and dry seasons

For areas 30 and 31 only

- a All months rainy (more than 50 mm rainfall)
- b Rainy season predominant: 8–11 months with over 50 mm
- c Rainy and dry seasons approximately equal: 5–7 months with over 50 mm
- d Dry season predominant: 1–4 months with over 50 mm

Other information

Sea Ice

Perennially unnavigable

Seasonally or perennially navigable. The extent of sea ice may vary widely from year to year

Icecaps

Seasonal rivers

Lakes

Seasonal lakes

Salt pans (dry salt lakes)

Canals

Reefs

Marshes or bogs

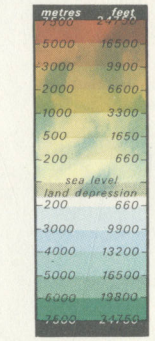
Coniferous forests

Mixed forests

Deciduous forests

Tropical forests

Relief



Heights and depths in metres

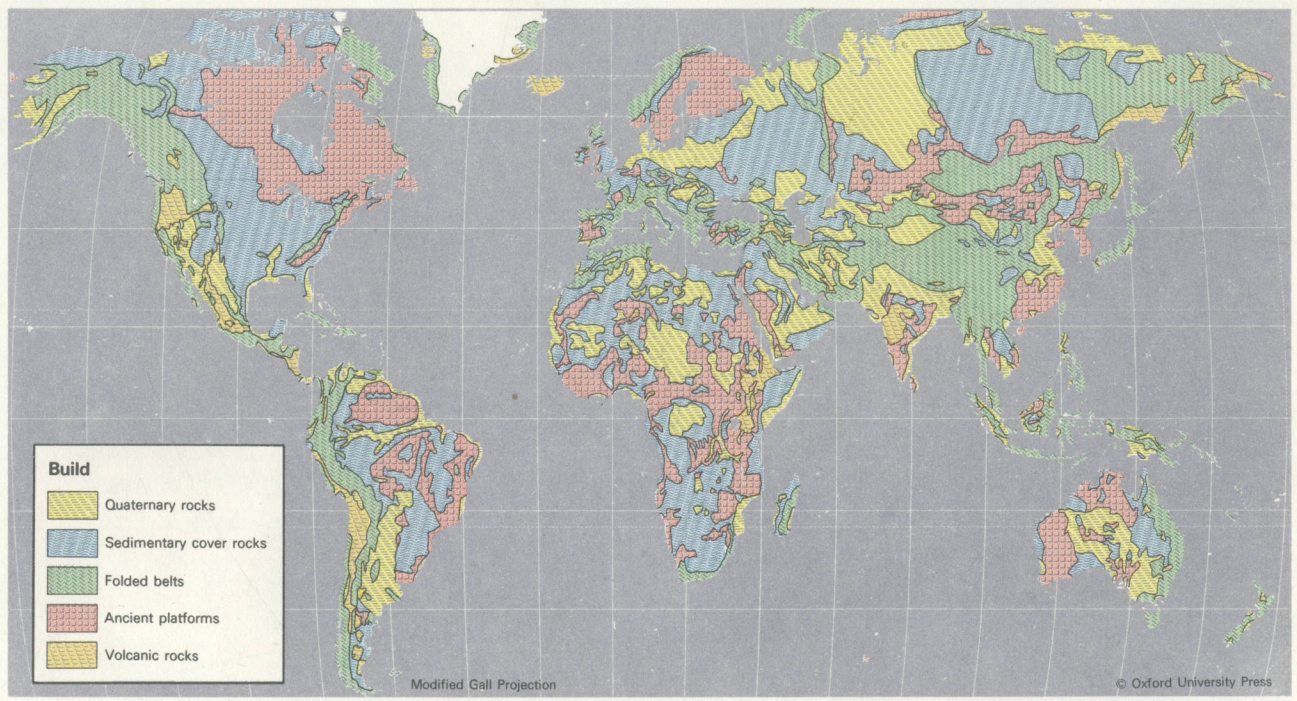
- Cities with over 1 million inhabitants
- Cities with 100,000 to 1 million inhabitants
- Selected other cities
- International boundaries
- Selected regional boundaries
- Railways
- The farthest limit of the Quaternary glaciation of the main polar icecap in the northern hemisphere is shown. Isolated glaciated areas are not shown.

Build (see map below)

- Quaternary: later Tertiary and Quaternary sediments
- Sedimentary cover: sedimentary cover rocks, flat-bedded or not strongly disturbed
- Folded belts: strongly disturbed sedimentaries, metaphorphic zones of younger fold mountains and strongly re-elevated blocks of complex structure
- Ancient platforms: areas of basement complex or peneplaned fold mountains not strongly uplifted
- Volcanic: plains or plateaux of relatively undisturbed Tertiary and Quaternary volcanics
- Volcanoes active in historic time
- Important scarp-forming faults and rift-valley sides

Sources

The Oxford Atlas, Oxford University Press, London, 1970
International Association of Volcanology, Catalogue of the active volcanoes of the world, Edinburgh, 1947
Climate: Professor D. L. Linton. University of Birmingham, UK
Fiziko-Geografičeskij Atlas Mira, Academy of Sciences, USSR, Moskva, 1964
The Antarctic: USGS Sketch Map Series, 1:500,000; Atlas Antarktiki, Volume I, MAGC, Moskva, 1966



Quaternary	metres	feet
sedimentary cover	5000	16500
folded belts	3000	9900
ancient platforms	2000	6600
volcanic	1000	3300
	500	1650
rift valleys volcanoes	200	660
ICE unnavigable seasonally navigable icecaps	sea level	
31 CLIMATE (see page 10) CITIES	land depression 200	660
over 1 million	3000	9900
over 100,000	4000	13200
heights in metres	5000	16500
	6000	19800
	7500	24750

1 : 25 MILLION APPROX.
1 inch:400 miles 1 cm.:250 km.
0 MILES 100 200 300 400 500
0 KMS 200 400 600 800

Conical Orthomorphic Projection

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Quaternary	metres	feet
sedimentary cover	9000	29700
folded belts	5000	16500
ancient platforms	3000	9900
volcanic	2000	6600
rift valleys volcanoes	1000	3300
	500	1650
	200	660
	sea level	
ICE unnavigable seasonally navigable icecaps	land depression	
	200	660
	3000	9900
	4000	13200
	5000	16500
	6000	19800
	7500	24750

heights in metres

31 CLIMATE (see page 10)

CITIES
- over 1 million
- over 100,000

0 MILES 100 200 300 400 500

1 : 25 MILLION APPROX.

1 inch:400 miles 1 cm.:250 km.

0 KMS. 200 400 600 800

Conical Orthomorphic Projection

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ATLANTIC OCEAN
Mediterranean Sea
Black Sea
Red Sea
Gulf of Guinea
Guinea Basin
Equator
SOUTH ATLANTIC OCEAN
Mid-Atlantic Ridge
Angola Basin
Walvis Ridge
Tropic of Cancer
Tropic of Capricorn
Cape Rise
Mozambique Ridge
Mozambique Basin
INDIAN OCEAN
Agulhas Plateau
Agulhas Bank
Str. of Gibraltar
Gulf of Sirte
Aegean Sea
Ionian Sea
Tyrrhenian Sea
Adriatic Sea
Sardinia
Corsica
Balearic Is.
Crete
Malta
Sicily
Lake Nasser
Lake Chad
Lake Tanganyika
Lake Victoria
L. Albert
L. Edward
L. Kariba
L. Malawi
L. Mweru
L. Turkana
L. Tana
Nile
White Nile
Blue Nile
Niger
Congo
Zambezi
Orange
Limpopo
Save
Kasai
Cuanza
Cuando
Cubango
Cunene
Luapula
Ruvuma
Rufiji
Tigris
Euphrates
Jordan
Suez Canal
Black Volta
Volta
Benue
Sanaga
Oubangui
Bahr el Arab
Bahr el Ghazal
Bahr el Jebel
Aruwimi
Uele
Kasai
Lualaba
Atbara
Arabian Desert
Western Desert
Libyan Desert
Nubian Desert
Sahara Desert
Great Western Erg
Great Eastern Erg
Erg Iguidi
Erg Chech
Chott Djerid
Chott Melrir
Qattara Depression
Okavango Swamp
Kalahari Desert
Namib Desert
Western Sahara
Tropic of Capricorn
Zenithal Equal-area Projection
© Oxford University Press
1 : 25 MILLION APPROX.
1 inch:400 miles 1 cm.:250 km.
0 MILES 100 200 300 400 500
0 KMS. 200 400 600 800
Quaternary
sedimentary cover
folded belts
ancient platforms
volcanic
rift valleys volcanoes
ICE unnavigable seasonally navigable icecaps
31 CLIMATE (see page 10)
CITIES over 1 million over 100,000
metres feet
5000 16500
3000 9900
2000 6600
1000 3300
500 1650
200 660
sea level
land depression
200 660
3000 9900
4000 13200
5000 16500
6000 19800
7500 24750
heights in metres
Belgrade
Sofia
Bulgaria
Yugoslavia
Albania
Greece
Italy
Rome
Naples
Marseilles
Barcelona
Pyrenees
Ebro
Oporto
Portugal
Madrid
Spain
Lisbon
Valencia
Sevilla
Mulhacén 3482
Gibraltar (Br.)
Tangier
Algiers
Oran
Tunis
Tell Atlas
Rif Mts.
High Plateaux
Saharan Atlas 2236
Madeira (Port.)
Casablanca
Rabat
Fes
Morocco
Marrakesh
Mt. Toubkal 4165
High Atlas
Santa Cruz
Las Palmas
Canary Islands (Sp.)
Tarābulus (Tripoli)
Benghazi
Jabal al Akhdar
Alexandria
Cairo
Port Said
Suez
Istanbul
Ankara
Turkey
Anatolian Plateau
Taurus Mts.
Izmir
Athens
Mt. Ararat 5165
Tbilisi
Black Sea
Euphrates
Tigris
Syria
Syrian Desert
Lebanon
Cyprus
Baghdad
Iraq
Tel Aviv/Jaffa
Israel
Amman
Jerusalem
Jordan
Nafud
Saudi Arabia
Mecca
Khartoum
Atbara
Nubian Desert
Egypt
Western Desert
Libyan Desert
Arabian Desert
Nile
Qattara Depression
Algeria
Libya
Tassili-n-Ajjer 2154
Ahaggar
Mt. Tahat 3005
Tibesti
Pic Touside 3265
Emi Koussi 3415
Ennedi 1450
Bodele
Air Massif 1800
Grand Erg of Bilma
Adrar of the Iforas
Western Sahara
Mauritania
Nouadhibou
Senegal
Dakar
Gambia
Guinea Bissau
Mali
Niger
Bamako
Niamey
Upper Volta
Ouagadougou
Chad
N'Djamena
Sudan
Darfur 3088
Kordofan
Kobar Sink
Ras Dashen 4620
Abuye Meda 4000
Mt. Elgon 4321
Ethiopian Highlands
Abyssinian Highlands
Addis Ababa
Mendebo Mts.
Rift Valley
Kenya
Nairobi
Mt. Kenya 5199
Mt. Kilimanjaro 5895
Mombasa
Uganda
Kampala
Owen Falls
Lake Victoria
Rwanda
Burundi
Mitumba Mts.
Western Rift Valley
Tanzania
Dar es Salaam
Ruvuma
Lurio
Mozambique
Malawi
Lake Malawi
Zambia
Lusaka
Lubumbashi
Katanga
Muchinga Mts.
Zaire
Kisangani
Boyoma Falls
Mt. Ruwenzori 5119
Mt. Kanaimbi 4507
Kinshasa
Brazzaville
Congo
Congo Basin
Gabon
Cabinda
Angola
Luanda
Lobito
Bié Plateau 2620
Kananga
Rhodesia (Zimbabwe)
Salisbury
Bulawayo
Victoria Falls
Okavango Swamp
Matopo Hills
Beira
Botswana
Windhoek
Walvis Bay
Namibia
Kalahari Desert
Namib Desert
Gt. Karas Mts.
South West Africa
Republic of South Africa
Pretoria
Johannesburg
Vaal
High Veld
Swaziland
Lesotho
Drakensberg 3482
Thabana Ntlenyana
Pietermaritzburg
Durban
Port Elizabeth
Cape Town
Gt. Karroo
Orange
Namaqualand
Ascension I. (Br.)
St. Helena (Br.)
6050
4306
Discovery Tablemount 671
Walvis Ridge 700
1287
220
113
Comoro Is.
Madagascar
Malagasy Republic
Antananarivo 2644
Ankaratra 2880
Fouta Djallon Mts.
Guinea
Conakry
Freetown
Sierra Leone
Pic de Tio 1443
Liberia
Monrovia
Mt. Nimba 1752
Ivory Coast
Abidjan
Ghana
Kumasi
L. Volta
Togo
Lomé
Benin
Ogbomosho
Nigeria
Kano
Jos Plateau
Ibadan
Lagos
Niger
Benue
Vogel Peak 2038
Adamoua Highlands
Cameroun
Mt. Cameroun 4070
Douala
Macias Nguema Biyogo
Equatorial Guinea
Central African Empire
Bangui
Zaire
Aruwimi
Uele
Oubangui
Sanaga
Chad
Sudan
Darfur
Kordofan
Ennedi
Bodele
Tibesti
Air Massif
Grand Erg of Bilma
Niger
Nigeria
Cameroun
Central African Empire
Gabon
Congo
Zaire
Uganda
Kenya
Tanzania
Rwanda
Burundi
Zambia
Angola
Malawi
Mozambique
Rhodesia (Zimbabwe)
Botswana
Namibia
Republic of South Africa
Lesotho
Swaziland
Malagasy Republic

14

ARCTIC OCEAN

U. S. S. R.

NORWAY

GREENLAND (Denmark)

CANADA

UNITED STATES

MEXICO

ATLANTIC OCEAN

PACIFIC OCEAN

Zenithal Equidistant Projection

1 : 25 MILLION APPROX.

1 inch.400 miles 1 cm.:250 km.

0 MILES 100 200 300 400 500

0 KMS. 200 400 600 800

metres	feet	sea level land depression	metres	feet
7500	24750		200	660
5000	16500		3000	9900
3000	9900		4000	13200
2000	6600		5000	16500
1000	3300		6000	19800
500	1650		7500	24750
200	660			

Quaternary sedimentary cover; folded belts; ancient platforms; volcanic; rift valleys; volcanoes; ICE unnavigable; seasonally navigable; icecaps; 31 CLIMATE (see page10); CITIES over 1 million; over 100,000; heights in metres

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NICARAGUA
Managua
COSTA RICA
San José
PANAMA
Caribbean Sea
Barranquilla
Cartagena
Maracaibo
Caracas
BARBADOS
TRINIDAD AND TOBAGO
ATLANTIC OCEAN
Panamá
Cocos Ridge
Bucaramanga
Medellín
Bogotá
Cali
COLOMBIA
ANDES
LLANOS
Orinoco
VENEZUELA
Georgetown
Paramaribo
Cayenne
GUYANA
SURINAM
FRENCH GUIANA
GUIANA HIGHLANDS
Equator
Quito
Cotopaxi 5896
ECUADOR
Guayaquil
Carnegie Ridge
Japurá
Negro
Amazon
Belém
Fortaleza
João Pessoa
Recife
Salvador
SELVAS
Madeira
Tapajós
Xingu
Tocantins
Araguaia
Parnaíba
São Francisco
Purus
Madre de Dios
BRAZIL
SERRA DOS PARECIS
MATO GROSSO PLATEAU
Brasília
Goiânia
Belo Horizonte
Vitória
Campinas
Campos
São Paulo
Rio de Janeiro
Curitiba
Lima
Titicaca
La Paz
BOLIVIA
Arequipa
CENTRAL CORDILLERA
EASTERN CORDILLERA
WESTERN CORDILLERA
PERU ANDES
Peru-Chile Trench
SOUTH PACIFIC OCEAN
Nasca Ridge
Iquique
ALTIPLANO
PARAGUAY
Asunción
Paraná
Paraguay
CHACO
PAMPAS
Tropic of Capricorn
Córdoba
Santa Fé
Concordia
Rosario
San Juan
Aconcagua 7035
Mendoza
URUGUAY
Porto Alegre
Rio Grande Rise
Valparaíso
Santiago
Buenos Aires
Montevideo
Plate
Uruguay
Chile Basin
Chile Rise
CHILEAN ANDES
ARGENTINA
PATAGONIA
Mar del Plata
Bahía Blanca
Colorado
Puerto Montt
Falkland Islands (Br.)
Falkland Rise
Tierra del Fuego
Cape Horn
Drake Passage
Scotia Ridge
South Georgia (Br.)
West Scotia Basin
Scotia Sea
South Shetland Islands (Br.)
South Orkney Islands (Br.)
South Sandwich Islands (Br.)
South Sandwich Trench
SOUTHERN OCEAN
Southeast Pacific Basin
Antarctic Circle
LARSEN ICE SHELF
ANTARCTIC PENINSULA
Weddell Sea
Bellingshausen Sea
ANTARCTICA
Argentine Basin
ATLANTIC OCEAN

	metres	feet
Quaternary	7500	24750
sedimentary cover	5000	16500
	3000	9900
folded belts	2000	6600
	1000	3300
ancient platforms	500	1650
	200	660
volcanic	sea level	
	land depression	
	200	660
	3000	9900
	4000	13200
	5000	16500
	6000	19800
	7500	24750

rift valleys
volcanoes
ICE
unnavigable
seasonally navigable
icecaps
31 CLIMATE (see page 10)
CITIES
over 1 million
over 100,000
heights in metres

Transverse Mercator Projection
© Oxford University Press
0 MILES 100 200 300 400 500
1 : 25 MILLION APPROX.
1 inch:400 miles 1 cm.:250 km.
0 KMS. 200 400 600 800

1 : 25 MILLION APPROX.
1 inch:400 miles 1 cm.:250 km.
0 MILES 100 200 300 400 500
0 KMS 200 400 600 800

MALAYSIA
THE PHILIPPINES
BRUNEI
SABAH
SARAWAK
BORNEO
Mt. Kinabalu 4101
Rajang
MULLER MTS.
SCHWANER MTS.
Kapuas
Barito
Banjarmasin
Karimata Strait
Celebes Sea
Davao 2954
Mindanao
MINAHASSA PENIN.
Halmahera
Strait of Makassar
G. or Tomini
Molucca Sea
MOLUCCAS
Ceram Sea
Ceram
CELEBES
DOBERAI PENINSULA
Mt. Kwoka 3000
WEST IRIAN
Manberamo
ORANGE MTS.
5029
Java Pura
Wewak
Sepik
Madang 4693
NEW GUINEA
PAPUA NEW GUINEA
Bismarck Archipelago
New Ireland
New Britain
New Britain Trench
9140
Laet 4107
Fly
Aru Is.
7440
Banda Sea
Tanimbar Is.
Arafura Sea
Torres Strait
Port Moresby
Solomon Sea
Sohano
Kieta
Solomon Islands (Br.)
Santa Cruz Islands (Br.)
Vityaz Trench
Tokelau Is. (N.Z. & U.S.A.)
Phoenix Is. (Br.& U.S.A.)
Phoenix I.
Nanumea I.
Tuvalu
Tarawa I.
Gilbert (Br.) Islands
NAURU
Ocean I. (Br.)
Equator
Micronesia
Melanesia
Solomon PACIFIC OCEAN
Caroline Islands (U.S.A. Trust)
Marshall Islands (U.S.A. Trust)
Palau Islands (U.S.A. Trust)
West Caroline Basin
East Caroline Basin
Eauripik Ridge
Rise
Jakarta
Semarang
Surabaya
3078
3676
Bandung
JAVA
Java Trench
Greater Sunda Islands
Java Sea
INDONESIA
Lesser Sunda Islands
Ujung Pandang
Timor
Timor Sea
Darwin
ARNHEM LAND
Gulf of Carpentaria
CAPE YORK PENINSULA
Great Barrier Reef
Coral Sea
Christmas Island (Aust.)
KIMBERLEY
853
Fitzroy
BARKLY TABLELAND
GREAT DIVIDING RANGE
GREAT SANDY DESERT
MACDONNELL RANGES
GIBSON DESERT
SIMPSON DESERT
HAMERSLEY RA.
1227
1515
Gascoyne
GREAT VICTORIA DESERT
Lake Eyre
STURT DESERT
NULLARBOR PLAIN
Great Australian Bight
AUSTRALIA
INDIAN OCEAN
Wharton Basin
West Australian Basin
Southeast Indian Basin
Naturaliste Ridge
Perth
Adelaide
Darling
Lachlan
Murrumbidgee
Murray
Brisbane
Newcastle
Sydney
Canberra
Mt. Kosciusko 2230
AUST. ALPS
Melbourne
Bass Strait
Tasmania
1573
SOUTHERN OCEAN
Tropic of Capricorn
Lord Howe Rise
Lord Howe I. (Aust.)
Norfolk Ridge
Norfolk Trough
Norfolk Island
Norfolk I. (Aust.)
New Caledonia (Fr.)
Nouméa
Loyalty Islands (Fr.)
New Hebrides (Br.-Fr.)
New Hebrides Trench
7570
North Fiji Basin
South Fiji Basin
Vanua Levu
Viti Levu
1322
Suva
FIJI
Lau Ridge
TONGA
Tonga Trench
8592
10882
Kermadec Trench
10047
Kermadec Is. (N.Z.)
Tasman Sea
NEW ZEALAND
Auckland
North Island
Mt. Egmont 2517
Wellington
South Island
Mt. Cook 3764
SOUTHERN ALPS
Chatham Rise
Bounty Basin
Chatham Is.(N.Z.)
WESTERN SAMOA
Samoa Islands
American Samoa
Tasman Sea

30a 30b 30c 30d 31a 31b 31c 31d 20 21 X

Quaternary	metres	feet
sedimentary cover	5000	16500
folded belts	3000	9900
ancient platforms	2000	6600
volcanic	1000	3300
rift valleys	500	1650
volcanoes	200	660
	sea level	
ICE unnavigable	land depression	
seasonally navigable icecaps	200	660
	3000	9900
	4000	13200
21 CLIMATE (see page 10)	5000	16500
CITIES	6000	19800
over 1 million	7000	23100
over 100,000		
heights in metres		

Zenithal Equidistant Projection

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17
Relief
ICE CAPS
feet
metres
16 500
5 000
13 200
4 000
9 900
3 000
6 600
2 000
3 300
1 000
1 650
500
650
200
sea level
0
650
200
6 600
2 000
13 200
4 000
16 500
5 000
23 100
7 000
Spot heights and depths in metres
© Oxford University Press
Modified Gall Projection
Equatorial Scale 1:88 Million approx.
Tropic of Cancer
Tropic of Capricorn
Equator
Arctic Circle
INTERNATIONAL DATE LINE
PACIFIC
OCEAN
NORTH
ATLANTIC
SOUTH
INDIAN
CANADA
U.S.A.
MEXICO
GREENLAND (Den.)
ICELAND
BRAZIL
ARGENTINA
U.S.S.R.
MONGOLIA
CHINA
INDIA
JAPAN
AUSTRALIA
INDONESIA
ALGERIA
LIBYA
EGYPT
SUDAN
ZAIRE
ANGOLA
SAUDI ARABIA
IRAN
TURKEY
Sahara Desert
NEW ZEALAND
SCALE 1:29 MILLION
POLAND
FRANCE
ITALY
SPAIN
SWEDEN
UNITED KINGDOM
SYRIA
IRAQ