Best
Available
Copy

DUPLICA

AD 632878

AD-632878

TECHNICAL REPORT

ES-19

CLIMATIC ATLAS OF SOUTHEAST ASIA

(Temperature, Rainfall, Temperature-Humidity Index)

by

Howard L. Ohman
Desert and Tropic Laboratory
Earth Sciences Division

Project Reference:
1VO-25001-A129

December 1965

U.S. Army Materiel Command
U.S. Army Natick Laboratories
Natick, Massachusetts

FOREWORD

A few features of the environment of Southeast Asia were described in a brief report published by this Division in June 1962, "Notes on Some Environmental Conditions Affecting Military Logistics in Thailand." The 20 pages of maps and graphs contained in this preliminary study emphasize selected climatic and land surface properties of Thailand and neighboring countries during the wettest and driest months of the year.

The present study focuses on the climate of Southeast Asia, and treats it more thoroughly than the earlier study. The 87 maps contained in the Atlas cover several aspects of temperature and rainfall as well as the temperature-humidity index, a device employed to provide a clue to human discomfort during the warmest hours of the day in the various sections of the region. Unlike the earlier study, maps have been prepared for every month of the year.

As both producer and user of this Atlas, the Earth Sciences Division appreciates the limitations as well as the value of this or any other collection of maps based on arithmetic means. The discerning user will be aware of the need for information in addition to that which can be retrieved from the maps, such as the frequency and duration of critical temperatures or the expectancy rates of particular weather types. These, as well as other more sophisticated studies, are in the making and will be forthcoming as separate publications. At the same time, no disparagement of the utility of maps based on mean values is intended. They continue to be useful for making broad quantitative comparisons between parts of the earth's surface. Most systems of climatic classification (e.g., Köppen and Thornthwaite) are based on monthly means. They also provide a convenient summation of energy over a period of time for purposes such as determining the month-by-month fuel requirements for heating. Where materiel is stored in large masses, as in warehouses, monthly means provide a good indication of temperature conditions within the interior of the storage mass.

In spite of any shortcomings that the maps in this Atlas may have, they should be useful in research and development and logistical planning for Southeast Asia. They also contribute to the general fund of scientific information concerning the environment of the area.

Appreciation is expressed to the many individuals within the Earth Sciences Division who contributed to the preparation of this Atlas.

L. W. TRUEBLOOD
Chief
Earth Sciences Division

APPROVED:

DALE H. SIELING, Ph. D.
Scientific Director

W. W. VAUGHAN
Brigadier General, USA
Commanding

CLIMATIC ATLAS FOR SOUTHEAST ASIA

1. Introduction

This Atlas describes the climate of Southeast Asia in a way that will be helpful to the Army in solving the many problems that are likely to arise during operations in this part of the world. Its maps provide coverage by month for the following elements: mean monthly temperature, mean daily maximum temperature, mean daily minimum temperature, absolute maximum temperature, mean monthly precipitation, mean number of rainy days, and temperature-humidity index.* A map showing mean annual precipitation is also included. Two additional maps delineate the principal physiographic features of the region and locate the meteorological stations for which climatic data were available. Herein delineated, Southeast Asia consists of Thailand, Vietnam, Laos, Cambodia, Burma (south of 25 degree north latitude), and the peninsular portion of Malaysia.

It is expected that the maps contained in this study will be used principally for planning purposes and staff briefings. With this in mind, the maps were designed to emphasize the changing patterns of climate, both with respect to place-to-place variations within the region, and month-to-month changes through the year. When used in conjunction with other studies on the climate of Southeast Asia (1, 2, 3, 4, 12), the maps provide a fairly complete picture of the changing month-to-month patterns of climate within the region.

In drawing the maps, certain difficulties were encountered. Because of limitations imposed by map scale, many minor variations of climate had to be ignored. As in most parts of the world, the network of meteorological stations for the study region is thin, particularly in mountainous areas; consequently, completion of the analysis depended largely on professional judgment in areas where data were lacking. The statistics used in the construction of the maps were taken from a number of sources and are based on station records of varying length. No attempt has been made to reduce the data to a common or normal time period, but some of the short-term records had to be ignored in the interest of "fitting" the isoplethic systems to the data field.

Because the arithmetic mean is used so extensively in this study, the potential user should be alerted to a popular misconception concerning its meaning. It is assumed frequently that the mean equals the median or 50th percentile, i.e., that it is a guide to the 50 percent probability value. This is the case only in frequency tabulations that are normal, a characteristic seldom observed in climatic distributions. Most frequency distributions of climatic elements are likely to be skewed in a manner causing divergence of the means and the 50th percentile. Fortunately, with respect to temperature, this divergence is small in the humid tropics and this is particularly true for the parts of Southeast Asia included in this study, with the possible exception of Laos and North Vietnam. As an example, for January (a month when the divergence is apt to be large) at Bangkok, Thailand, mean and median daily minimum temperatures are 67.7°F and 70.7°F, respectively, based on ten years of record. The mean and median daily maximum temperatures were even closer at 89.1°F and 89.6°F. Precipitation is another matter. For example, 50 years of January monthly mean values of precipitation at Phetchabun, Thailand, produce a period-of-record mean of 0.50 inch and a median of 0.00 inch. The wrong impression given by the mean is even more apparent when it is pointed out that 60 percent of the Januaries had 0.00 precipitation, and 80 percent had amounts less than the mean. It is unfortunate that maps of median monthly precipitation could not be prepared. The actual monthly values necessary for calculation of the median are available for only a few locations in Southeast Asia.

2. Climatic Brief on Southeast Asia

The climate of Southeast Asia is characterized as low latitude monsoon chiefly because of its tropical temperature regime and a well-established cycle of wet and dry seasons. In general, the southwest or wet monsoon prevails from mid-May to mid-September, and the northeast or dry monsoon predominates from mid-October to mid-March. Short transition

---

* See Section 6 for definitions of statistical terms.

MAP LIST

Maps and Map Series	Map Number
Physiography	1
Station Locations	2
Mean Monthly Temperature Series	3-14
Mean Daily Maximum Temperature Series	15-26
Mean Daily Minimum Temperature Series	27-38
Absolute Maximum Temperature Series	39-50
Mean Monthly Precipitation Series	51-62
Mean Annual Precipitation	63
Mean Number of Rainy Days Series	64-75
Temperature-Humidity Index Series	76-87

ABSTRACT

Eighty-seven maps present the distribution in Southeast Asia (Thailand, Vietnam, Laos, Cambodia, Burma south of 25°N. Latitude, and the peninsular portion of Malaysia) of various climatic statistics of temperature, rainfall, and the temperature-humidity index. Maps for each month of the year have been prepared for: mean monthly temperature, mean daily maximum temperature, mean daily minimum temperature, absolute maximum temperature, mean monthly rainfall, mean number of rainy days per month, and mean daily temperature-humidity index for the warmest hour of the day. Single maps of mean annual rainfall, the physiography of the region, and of the names and location of climatic stations are also included. The maps are drawn in considerable detail having been based not only on the available climatic data but also on the distribution of mountain ranges, major water bodies, and other geographic features. A brief text discusses the preparation of the maps and describes a few of the important distributional aspects of climate shown by the maps.

Unclassified

Security Classification

DOCUMENT CONTROL DATA - R&D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY *(Corporate author)* U. S. Army Natick Laboratories	2a. REPORT SECURITY CLASSIFICATION Unclassified 2b. GROUP

3. REPORT TITLE

CLIMATIC ATLAS FOR SOUTHEAST ASIA

4. DESCRIPTIVE NOTES *(Type of report and inclusive dates)*

5. AUTHOR(S) *(Last name, first name, initial)*

OHMAN, HOWARD L.

6. REPORT DATE December 1965	7a. TOTAL NO. OF PAGES 94	7b. NO. OF REFS 36
8a. CONTRACT OR GRANT NO. b. PROJECT NO. 1V025001A129 c. d.	9a. ORIGINATOR'S REPORT NUMBER(S) ES-19 9b. OTHER REPORT NO(S) *(Any other numbers that may be assigned this report)*	

10. AVAILABILITY/LIMITATION NOTICES

Distribution of this document is unlimited. Release to Clearing House for Federal Scientific and Technical Information is authorized.

11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY Desert and Tropic Laboratory, Earth Sciences Division, U.S. Army Natick Laboratories, Natick, Mass.

13. ABSTRACT

Eighty-seven maps present the distribution in Southeast Asia (Thailand, Vietnam, Laos, Cambodia, Burma south of 25° N. Lat., and the peninsular portion of Malayasia) of various climatic statistics of temperature, rainfall, and the temperature-humidity index. Maps for each month of the year have been prepared for: mean monthly temperature, mean daily maximum temperature, mean daily minimum temperature, absolute maximum temperature, mean monthly rainfall, mean number of rainy days per month, and mean daily temperature-humidity index for the warmest hour of the day. Single maps of mean annual rainfall, the physiography of the region, and of the names and location of climatic stations are also included. The maps are drawn in considerable detail, having been based not only on the available climatic data but also on the distribution of mountain ranges, major water bodies, and other geographic features. A brief text discusses the preparation of the maps and describes a few of the important distributional aspects of climate shown by the maps.

Unclassified
Security Classification

14. KEY WORDS	LINK A ROLE	LINK A WT	LINK B ROLE	LINK B WT	LINK C ROLE	LINK C WT
Maps	8,0					
Distribution	9					
Temperature	9					
Rainfall	9					
Humidity	9					
Southeast Asia	8					

INSTRUCTIONS

1. ORIGINATING ACTIVITY: Enter the name and address of the contractor, subcontractor, grantee, Department of Defense activity or other organization *(corporate author)* issuing the report.

2a. REPORT SECURITY CLASSIFICATION: Enter the overall security classification of the report. Indicate whether "Restricted Data" is included. Marking is to be in accordance with appropriate security regulations.

2b. GROUP: Automatic downgrading is specified in DoD Directive 5200.10 and Armed Forces Industrial Manual. Enter the group number. Also, when applicable, show that optional markings have been used for Group 3 and Group 4 as authorized.

3. REPORT TITLE: Enter the complete report title in all capital letters. Titles in all cases should be unclassified. If a meaningful title cannot be selected without classification, show title classification in all capitals in parenthesis immediately following the title.

4. DESCRIPTIVE NOTES: If appropriate, enter the type of report, e.g., interim, progress, summary, annual, or final. Give the inclusive dates when a specific reporting period is covered.

5. AUTHOR(S): Enter the name(s) of author(s) as shown on or in the report. Enter last name, first name, middle initial. If military, show rank and branch of service. The name of the principal author is an absolute minimum requirement.

6. REPORT DATE: Enter the date of the report as day, month, year; or month, year. If more than one date appears on the report, use date of publication.

7a. TOTAL NUMBER OF PAGES: The total page count should follow normal pagination procedures, i.e., enter the number of pages containing information.

7b. NUMBER OF REFERENCES: Enter the total number of references cited in the report.

8a. CONTRACT OR GRANT NUMBER: If appropriate, enter the applicable number of the contract or grant under which the report was written.

8b, 8c, & 8d. PROJECT NUMBER: Enter the appropriate military department identification, such as project number, subproject number, system numbers, task number, etc.

9a. ORIGINATOR'S REPORT NUMBER(S): Enter the official report number by which the document will be identified and controlled by the originating activity. This number must be unique to this report.

9b. OTHER REPORT NUMBER(S): If the report has been assigned any other report numbers *(either by the originator or by the sponsor)*, also enter this number(s).

10. AVAILABILITY/LIMITATION NOTICES: Enter any limitations on further dissemination of the report, other than those imposed by security classification, using standard statements such as:

(1) "Qualified requesters may obtain copies of this report from DDC."

(2) "Foreign announcement and dissemination of this report by DDC is not authorized."

(3) "U. S. Government agencies may obtain copies of this report directly from DDC. Other qualified DDC users shall request through _____."

(4) "U. S. military agencies may obtain copies of this report directly from DDC. Other qualified users shall request through _____."

(5) "All distribution of this report is controlled. Qualified DDC users shall request through _____."

If the report has been furnished to the Office of Technical Services, Department of Commerce, for sale to the public, indicate this fact and enter the price, if known.

11. SUPPLEMENTARY NOTES: Use for additional explanatory notes.

12. SPONSORING MILITARY ACTIVITY: Enter the name of the departmental project office or laboratory sponsoring *(paying for)* the research and development. Include address.

13. ABSTRACT: Enter an abstract giving a brief and factual summary of the document indicative of the report, even though it may also appear elsewhere in the body of the technical report. If additional space is required, a continuation sheet shall be attached.

It is highly desirable that the abstract of classified reports be unclassified. Each paragraph of the abstract shall end with an indication of the military security classification of the information in the paragraph, represented as *(TS)*, *(S)*, *(C)*, or *(U)*.

There is no limitation on the length of the abstract. However, the suggested length is from 150 to 225 words.

14. KEY WORDS: Key words are technically meaningful terms or short phrases that characterize a report and may be used as index entries for cataloging the report. Key words must be selected so that no security classification is required. Identifiers, such as equipment model designation, trade name, military project code name, geographic location, may be used as key words but will be followed by an indication of technical context. The assignment of links, rules, and weights is optional.

CLIMATIC ATLAS FOR SOUTHEAST ASIA

1. Introduction

This Atlas describes the climate of Southeast Asia in a way that will be helpful to the Army in solving the many problems that are likely to arise during operations in this part of the world. Its maps provide coverage by month for the following elements: mean monthly temperature, mean daily maximum temperature, mean daily minimum temperature, absolute maximum temperature, mean monthly precipitation, mean number of rainy days, and temperature-humidity index.* A map showing mean annual precipitation is also included. Two additional maps delineate the principal physiographic features of the region and locate the meteorological stations for which climatic data were available. Herein delineated, Southeast Asia consists of Thailand, Vietnam, Laos, Cambodia, Burma (south of 25 degree north latitude), and the peninsular portion of Malaysia.

It is expected that the maps contained in this study will be used principally for planning purposes and staff briefings. With this in mind, the maps were designed to emphasize the changing patterns of climate, both with respect to place-to-place variations within the region, and month-to-month changes through the year. When used in conjunction with other studies on the climate of Southeast Asia (1, 2, 3, 4, 12), the maps provide a fairly complete picture of the changing month-to-month patterns of climate within the region.

In drawing the maps, certain difficulties were encountered. Because of limitations imposed by map scale, many minor variations of climate had to be ignored. As in most parts of the world, the network of meteorological stations for the study region is thin, particularly in mountainous areas; consequently, completion of the analysis depended largely on professional judgment in areas where data were lacking. The statistics used in the construction of the maps were taken from a number of sources and are based on station records of varying length. No attempt has been made to reduce the data to a common or normal time period, but some of the short-term records had to be ignored in the interest of "fitting" the isoplethic systems to the data field.

Because the arithmetic mean is used so extensively in this study, the potential user should be alerted to a popular misconception concerning its meaning. It is assumed frequently that the mean equals the median or 50th percentile, i.e., that it is a guide to the 50 percent probability value. This is the case only in frequency tabulations that are normal, a characteristic seldom observed in climatic distributions. Most frequency distributions of climatic elements are likely to be skewed in a manner causing divergence of the means and the 50th percentile. Fortunately, with respect to temperature, this divergence is small in the humid tropics and this is particularly true for the parts of Southeast Asia included in this study, with the possible exception of Laos and North Vietnam. As an example, for January (a month when the divergence is apt to be large) at Bangkok, Thailand, mean and median daily minimum temperatures are 67.7°F and 70.7°F, respectively, based on ten years of record. The mean and median daily maximum temperatures were even closer at 89.1°F and 89.6°F. Precipitation is another matter. For example, 50 years of January monthly mean values of precipitation at Phetchabun, Thailand, produce a period-of-record mean of 0.50 inch and a median of 0.00 inch. The wrong impression given by the mean is even more apparent when it is pointed out that 60 percent of the Januaries had 0.00 precipitation, and 80 percent had amounts less than the mean. It is unfortunate that maps of median monthly precipitation could not be prepared. The actual monthly values necessary for calculation of the median are available for only a few locations in Southeast Asia.

2. Climatic Brief on Southeast Asia

The climate of Southeast Asia is characterized as low latitude monsoon chiefly because of its tropical temperature regime and a well-established cycle of wet and dry seasons. In general, the southwest or wet monsoon prevails from mid-May to mid-September, and the northeast or dry monsoon predominates from mid-October to mid-March. Short transition

---

* See Section 6 for definitions of statistical terms.

periods in spring and fall separate the two principal monsoon seasons. The intensity and timing of the rainy season, however, varies considerably with location, so that local variations of climate are numerous and in some instances sharp. Topography is the chief cause for climatic modification, with the Annam Mountain Range, paralleling the Vietnamese coast on the east, and the peninsular ranges of Burma and Thailand on the west, being particularly significant relief features. Windward slopes of these ranges are characteristically cloudy and rainy, whereas leeward slopes are relatively cloud-free and rainless.

The southwest monsoon is typified by airflow from the subtropical high pressure cells of the southern hemisphere to a low pressure cell centered over interior Asia. The air transported into the region is warm, moist, and unstable, causing heavy local showers and thunderstorms in most sections of the region. For the most part, the showers occur during the afternoon hours, caused chiefly by the combined effects of orography and convection, and are especially heavy on the western and southwestern slopes of the major mountain ranges. Owing to the protection afforded by the Annam Mountain Range, the eastern coastal districts of Vietnam frequently experience periods of weather that are clear and dry. The heavy rains of summer may cause extensive flooding of low lying areas, particularly the flood plains of the major rivers in Cambodia, Thailand, Burma, and South Vietnam. Temperatures during the summer monsoon are not exceptionally high on the average, ranging from the high eighties or low nineties during the hottest part of the day to the high seventies or low eighties during the coolest part of the night in most sections of the region. In the mountains, temperatures are lower, decreasing at a rate of about 3 degrees Fahrenheit for every 1,000 feet increase in elevation.

The northeast or winter monsoon season is characterized by easterly or northeasterly airflow that brings comparatively cool and dry air into Southeast Asia, particularly the northernmost sections of the region. Temperatures during winter are not extreme, generally reaching into the high sixties or low seventies during the afternoon hours, and dropping to the mid-fifties at night in northern sections. In the south and in the peninsular portions of the region, temperatures are some 5 to 10 degrees higher both day and night. Occasional frosts have been experienced in the upland districts of the north, the coldest section in general. Snowfall is all but unknown throughout the region except perhaps at the higher elevations in the north. During the winter monsoon, precipitation is heavier and more frequent along the east coast of Vietnam and in the peninsular portions of Thailand and Malaysia than in other districts. In both these areas, the winter rains are caused by moisture-laden air arriving at the coasts after lengthy trajectories over relatively large and warm bodies of water. As the air ascends the slopes of the mountain ranges inland from the coasts, condensation takes place, and much cloudiness and rainy weather of the showery type results. Highest temperatures for the region in general occur during April, a transition month when skies are clear and the air dry. During April, daily maximum temperatures frequently exceed 100°F, and on some occasions 110°F at locations well removed from the coasts, particularly in Burma and Thailand. Extremes above 100°F are practically unknown at coastal sites where the maritime influence prevents undue heating of the atmosphere.

3. The Map Series

a. Mean Monthly Temperature (Maps 3-14)

Mean temperatures are fairly uniform throughout Southeast Asia. When compared at the same or similar elevations, temperatures differ little from one section of the region to another. Effects of latitude are evidenced chiefly in the northern uplands of the region where winter cooling causes mean temperatures to drop to levels between 65° and 70°F during the coldest month (January). By comparison, temperatures for the warmest month (April) average between 80° and 85°F in the same area. This difference of 15 to 20 degrees in mean monthly temperature between the coldest and warmest months is the widest mean annual temperature range for the study region. In the peninsular portions of Thailand and Malaysia, seasonality is not nearly so evident, with most stations showing means for both coldest and warmest months near or slightly above 80°F, and a mean annual temperature range of less than 5 degrees Fahrenheit. The lowest monthly temperature means shown are those for high elevations in the north and west, where mean January temperatures drop to levels between 55° and 60°F at crest elevations.

b. Mean Daily Maximum Temperature (Maps 15-26)

The maps for mean daily maximum temperature show patterns much like those of mean monthly temperatures: some seasonality in the north, uniform temperature regime in general, and sharply contrasting thermal districts in the mountains. This set of maps represents average mid-afternoon temperatures since the daily maximum is generally reached about 1400 hours LST. The maps show that the heat center for Southeast Asia is located in the Irrawaddy River lowlands of Burma, where mean daily maximum temperatures are in excess of 100°F during the warmest month, April. At all coastal locations including those of Vietnam, Cambodia, Burma, Thailand, and Malaysia the high moisture content of the air has a moderating influence on temperatures. Consequently, mean daily maximum temperatures for the warmest month are not as high as those for interior sites, averaging from 86° to 94°F for the most part.

c. Mean Daily Minimum Temperature (Maps 27-38)

Like the mean monthly and the mean daily maximum temperature maps, the maps of mean daily minimum temperature reflect the influence of high relief, location in the low latitudes, and monsoonal control of the temperature regime. Since the daily minimum temperature is generally reached about 1/2 hour before sunrise, the maps show the average distribution of temperature during the coldest part of the night. The relative warmth of Southeast Asia throughout the year is emphasized by this series, for even during January, the coldest month, mean daily minima remain above 50°F in all districts (mountains excepted), and above 70°F in the peninsular districts of the south.

d. Absolute Maximum Temperature (Maps 39-50)

The maps for absolute maximum temperature show the same basic patterns of temperature distribution as the maps for mean monthly and mean daily maximum temperatures. During April, the warmest month, temperatures above 110°F have been experienced at one time or another at nearly every station in the central Irrawaddy River valley of Burma, the "hot spot" for the region in general. The highest temperature ever recorded anywhere within Southeast Asia is 114°F, reached during April at Mandalay, Burma. Central Thailand similarly is an area conducive to very high temperatures during the hot season. Here, many stations show absolute maxima for April in the 105°-110°F range. At coastal sites, the moderating influence of oceanic water bodies on heating of the atmosphere is quite apparent, with absolute maxima being held mostly to the mid-to high-ninety degree range. During the cold months, December for example, the highest temperatures attainable generally do not exceed 95°F in northern districts and 100°F in the south.

e. Mean Monthly and Annual Precipitation (Maps 51-63)

For most of Southeast Asia, winter is the dry season and summer the wet. Generally, more than 80 percent of the rain falls from April through October, the season of the principal or southwest monsoon. Heavy monsoonal rains usually begin the second or third week in April, earlier in the south, later in the far northwest, and continue to the first or second week in November. The timing of the onset and ending of the rainy season, however, is extremely unstable, varying as much as 30 days from one year to the next. Monthly rainfall intensities during the wet season vary greatly from place to place depending on exposure and elevation. For example, the map for July shows much areal contrast, with all mountain regions receiving upwards of 10 inches of rain, while the Central Valley of Thailand and the Irrawaddy lowlands of Burma receive only 2 to 5 inches. The dry season, extending from mid-November to mid-April is long and severe. Through the central and northern districts of the region, monthly rainfall averages only a small fraction of an inch during this period, and nowhere exceed one inch.

The Kra plain of Thailand and small adjoining districts of Malaysia constitute exceptions to the usual cycle of one prolonged dry and one well defined wet season each year. In these areas the annual rainfall regime displays two seasonal peaks, with considerable rain in all months. The southwest monsoon causes a primary rainy season from April to mid-August, and the northeast, or retreating monsoon, a shorter but intense rainy season from September to December, with November the wettest month of the year.

Average rainfall totals between 20 to 30 inches are reported for November at many stations on this exposed coast.

On an annual basis, rainfall is heaviest in the coastal and mountain districts of peninsular Burma, where totals exceed 200 inches in places. Other areas of heavy rainfall include the coastal mountain districts of Cambodia with upwards of 150 inches, the uplands and eastern lowlands of Malaysia with generally more than 100 and up to 200 inches of rainfall in places, and the western and southwestern slopes of the Annam Mountain Range of Vietnam and Laos with totals between 100 and 150 inches. Rainfall is least in the Irrawaddy lowlands of Central Burma and in the Central Valley of Thailand where it averages less than 30 inches per year. In South Vietnam, a small section of the southeastern coastal zone receives less than 40 inches annually, also a scant amount for that part of the world.

f. Mean Number of Rainy Days (Maps 64-75)

This series of maps also provides striking evidence of the alternation of the wet and dry seasons. From December to April, less than one day of rain per month is recorded on the average for all of Southeast Asia except for portions of peninsular Thailand and Malaysia where 15 to 20 days with rain per month is not unusual. During this period, skies are typically cloudless, visibilities unrestricted, and rain, even in small intensities, is a rarity. Beginning with May, however, and continuing to November, the monthly patterns of rainy days change to ones of sharp contrast with those of the dry season. All wet-season months show rain-day occurrence rates of at least 6 and generally more than 10 days in most sections of the region. July is the month having the highest frequency of rain-days, with more than 20 days of rain occurring in many sections. Even higher rates can be expected, however, on exposed mountain slopes and windward coasts where practically every day is a rain-day.

g. Temperature-Humidity Index (Maps 76-87)

The maps of temperature-humidity index provide a means for estimating the monthly average degree of discomfort that can be expected during the hottest part of the day (mid-afternoon). The maps were drawn to data derived by Thom's method[31] of computing the discomfort index (DI),* the formula for which reads: $DI = 0.4\,(t_d + t_w) + 15$, in which t_d is the dry-bulb temperature, and t_w, the wet-bulb temperature. To obtain representative mid-afternoon values for DI, the mean maximum temperature was used as the value for t_d and, for t_w a value based on computations involving the mean daily maximum temperature and the average mid-afternoon relative humidity was used. It is recognized that results may be slightly high, but the degree of over-estimation is not considered serious.

The DI is a good indicator of personal discomfort, but by no means is infallible, since people respond differently to the same degree of climatic stress. Generally, however, many people begin to feel discomfort when the DI rises above 70, and when it reaches 75, most people become uncomfortable. When the index reaches 79, everyone is uncomfortable, with most people acutely so. Above 80, discomfort becomes serious. It should be recognized that the DI was designed primarily for indoor use. Outdoors, the degree of discomfort produced by any combination of temperature and humidity is decreased by the movement of air and increased by solar radiation.

As might be expected, the maps for the warmest months (March and April) show the highest levels of discomfort, both with respect to areal extent as well as degree of discomfort. During this period, some low-lying sections of central Burma and Thailand have a DI of 87, the highest index reached in the region. At the same time, other low-lying sections and much of the plateau districts have DI's above 81. The tropicality of the region is reflected to a degree in all maps. Even in January most of the area has DI's higher than 70.

---

* Called the temperature-humidity index (THI) by the U.S. Weather Bureau.

4. References

1. Air Weather Service, Climate of North Vietnam, prepared by Technical Services, 20th Weather Squadron, APO 96525, 1st Weather Wing, Special Study 105-4, June 1965.

2. Air Weather Service, Climate of Thailand, prepared by Detachment 51, 1st Weather Wing, APO 96525, Special Study 105-10, Aug. 1965.

3. Air Weather Service, Climatic Atlas of Indochina, prepared by Technical Services, 20th Weather Squadron, APO 925, 1st Weather Wing, Special Study 105-6, Dec. 1964.

4. Air Weather Service, Climatic Brief for Southeast Asia, prepared by the Climatology Division, S&CS, 1st Weather Wing, APO 925, Jan. 1961.

5. Air Weather Service, unpublished Data Tabulation for Burma, prepared by the Climatology Division, 1st Weather Wing, May 1962.

6. Air Weather Service, unpublished Data Tabulation for Cambodia, prepared by the Climatology Division, 1st Weather Wing, April 1961.

7. Air Weather Service, unpublished Data Tabulation for Laos, prepared by the Climatology Division, 1st Weather Wing, Jan. 1961.

8. Air Weather Service, unpublished Data Tabulation for Malaya, prepared by the Climatology Division, 1st Weather Wing, Aug. 1962.

9. Air Weather Service, unpublished Data Tabulation for North Viet-Nam, prepared by the Climatology Division, 1st Weather Wing, Jan. 1961.

10. Air Weather Service, unpublished Data Tabulation for South Viet-Nam, prepared by the Climatology Division, 1st Weather Wing, Jan. 1961.

11. Air Weather Service, unpublished Data Tabulation for Thailand, prepared by the Climatology Division, 1st Weather Wing, June 1961.

12. Air Weather Service, Weather and Climate of Indochina, prepared by the Office of Climatology, Tokyo Weather Central, Hq. 1st Weather Wing, APO 925, June 1954.

13. Barton, Thomas F., Thailand's Rainfall Distribution by Geographic Regions, Journal of Geography, Vol. LXI, No. 3, March 1963, pp. 110-118.

14. Blanchard, Wendell, et al, Thailand, Human Relations Area Files Press, New Haven, 1958.

15. Brandli, H., Climate in Siam, Siam Ministry of Commerce and Communications, Siam Nature and Industry, Bangkok, 1930.

16. British Meteorological Office, Air Ministry, Meteorological Report on the Kra Peninsula, 1944.

17. Bunnag, Charoon V., and Khun Visikt Dharaks, Climates of Siam, Royal Siamese Navy, Meteorological Department, 1947.

18. Dobby, E.H.G., Southeast Asia, University of London Press, London, 1960.

19. Earth Sciences Division, Notes on Some Environmental Conditions Affecting Military Logistics in Thailand, Special Report S-1, QMR&E Center, Natick, Massachusetts, June 1962.

20. Environmental Protection Division, Environment of Southeast Asia, QMR&D Command Report No. 219, Natick, Massachusetts, Aug. 1953.

21. Gherzi, Ernet, Climatological Atlas of East Asia, Shanghai, Tou'sewe Catholic Mission Pr., 1944.

22. Huke, Robert E., Thailand, Focus, Vol. XII, No. 2, Feb. 1962.

23. Japan Hydrographic Department, Strategic Meteorology of South East Asia, 1944.

24. John, I.G., and Hare, F.R., Winter Circulation Over Burma, Thailand, and Indochina, Great Britain Meteorological Office, Synoptic Division's Technical Memorandum, No. 120, 1946.

25. Pendleton, Robert L., Thailand, Duell, Sloan and Pearce, N.Y., 1962.

26. Sternstein, Lawrence, The Rainfall of Thailand, Indiana University Foundation Research Division, Bloomington, Indiana, Final Report, U.S. Army Contract No. DA19-129-QM-1582, Aug. 1962.

27. Thailand Meteorological Department, Annual Meteorological Data 1946-1950, Bangkok.

28. Thailand Meteorological Department, Monthly and Annual Rainfall of Thailand, Bangkok, 1952.

29. Thailand Meteorological Department, Monthly Meteorological Bulletin, 1943-1952, Bangkok.

30. Thailand Meteorological Department, Monthly Meteorological Summary for Aviation, Jan. 1951-Dec. 1951.

31. Thom, E.C., The Discomfort Index, Weatherwise, Vol. 12, No. 2, April 1959, pp. 57-60.

32. Watts, Ian, Equatorial Weather with Particular Reference to Southeast Asia, London Un., London Press, 1953.

33. Weather Bureau, U.S. Department of Commerce, Index of Climatic and Weather Data, Washington, D.C. (no date).

34. Weather Bureau, U.S. Department of Commerce, World Weather Records, 1941-50, Washington, D.C., 1959.

35. Weather Information Branch, Hq. Army Air Forces, Climate of Bangkok, General Climatic Information Guide No. 75.

36. Weather Research Center, Statistical Division, U.S. Weather Bureau, Climate and Weather of Southeastern Asia, Part I, Vol. V, May 1942.

5. Definitions

1. MEAN MONTHLY TEMPERATURE. Average of the mean temperatures of each day within the month for a period of years.

2. MEAN DAILY MAXIMUM TEMPERATURE. Average of the maximum temperatures of each day within a given period, usually a month, for a period of years.

3. MEAN DAILY MINIMUM TEMPERATURE. Average of the minimum temperatures for each day within a given period, usually a month, for a period of years.

4. ABSOLUTE MAXIMUM TEMPERATURE. The highest temperature recorded during the period of record.

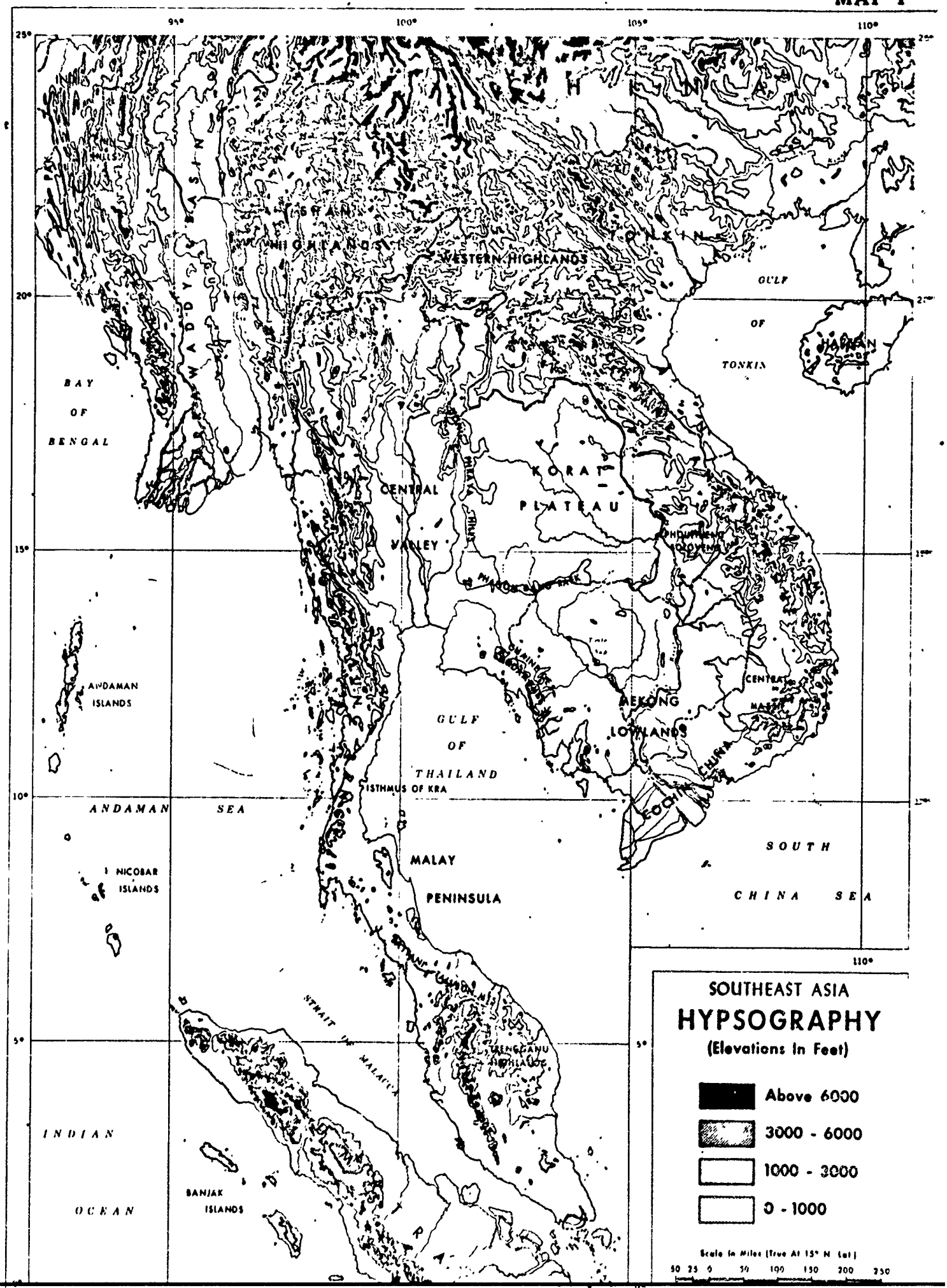
5. MEAN MONTHLY PRECIPITATION. Average of the precipitation totals of each day within the month for a period of years.

6. MEAN ANNUAL PRECIPITATION. Average of the precipitation totals of each month within a year for a period of years.

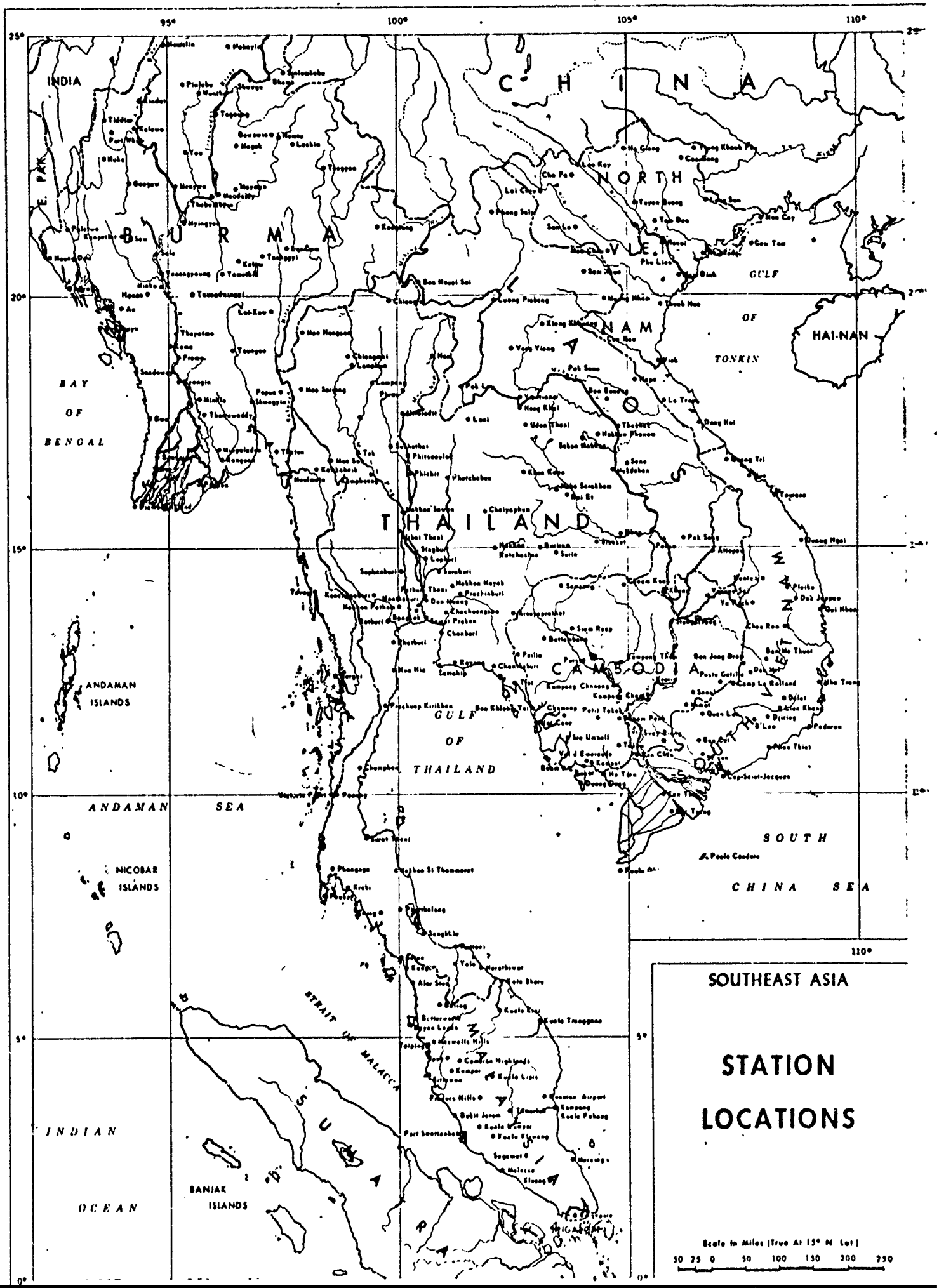
7. MEAN NUMBER OF RAINY DAYS. The number of days with rain within the month, averaged over a period of years. In Vietnam, Laos, Cambodia, and Thailand an amount equal to or greater than 0.004 inch of rain must be recorded in order to qualify as a rain-day. Corresponding amounts for Malaysia and Burma are 0.01 inch and 0.1 inch, respectively.

8. TEMPERATURE HUMIDITY INDEX. A measure of human discomfort as computed by Thom's formula (31).

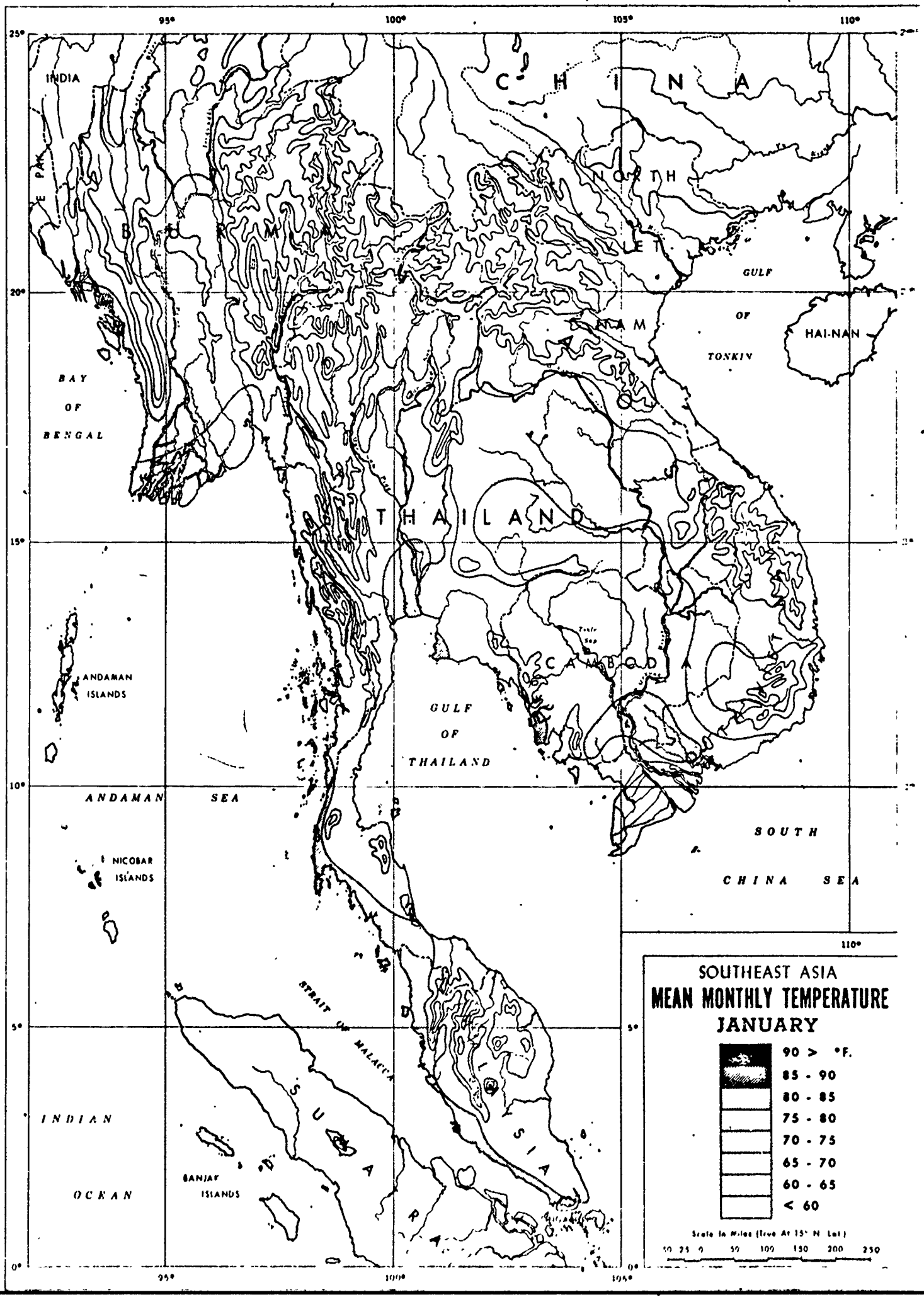
MAP 1


SOUTHEAST ASIA
HYPSOGRAPHY
(Elevations In Feet)
Above 6000
3000 - 6000
1000 - 3000
0 - 1000
Scale In Miles (True At 15° N Lat)
BAY OF BENGAL
ANDAMAN ISLANDS
NICOBAR ISLANDS
ANDAMAN SEA
INDIAN OCEAN
BANJAK ISLANDS
WESTERN HIGHLANDS
CENTRAL VALLEY
KORAT PLATEAU
MEKONG LOWLANDS
GULF OF THAILAND
ISTHMUS OF KRA
MALAY PENINSULA
STRAIT OF MALACCA
GULF OF TONKIN
HAINAN
SOUTH CHINA SEA
COCHIN CHINA
95°
100°
105°
110°
25°
20°
15°
10°
5°

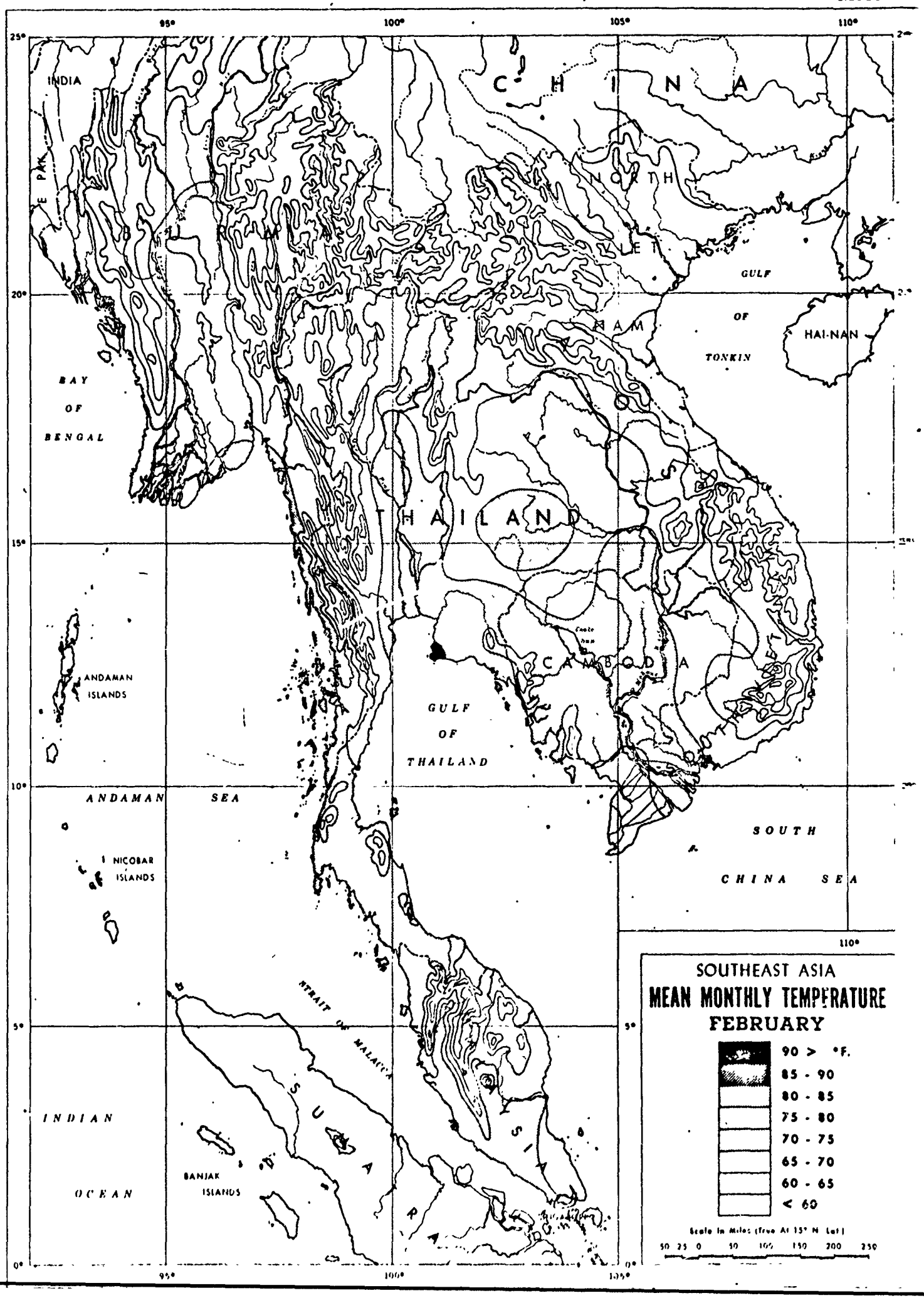
MAP 2

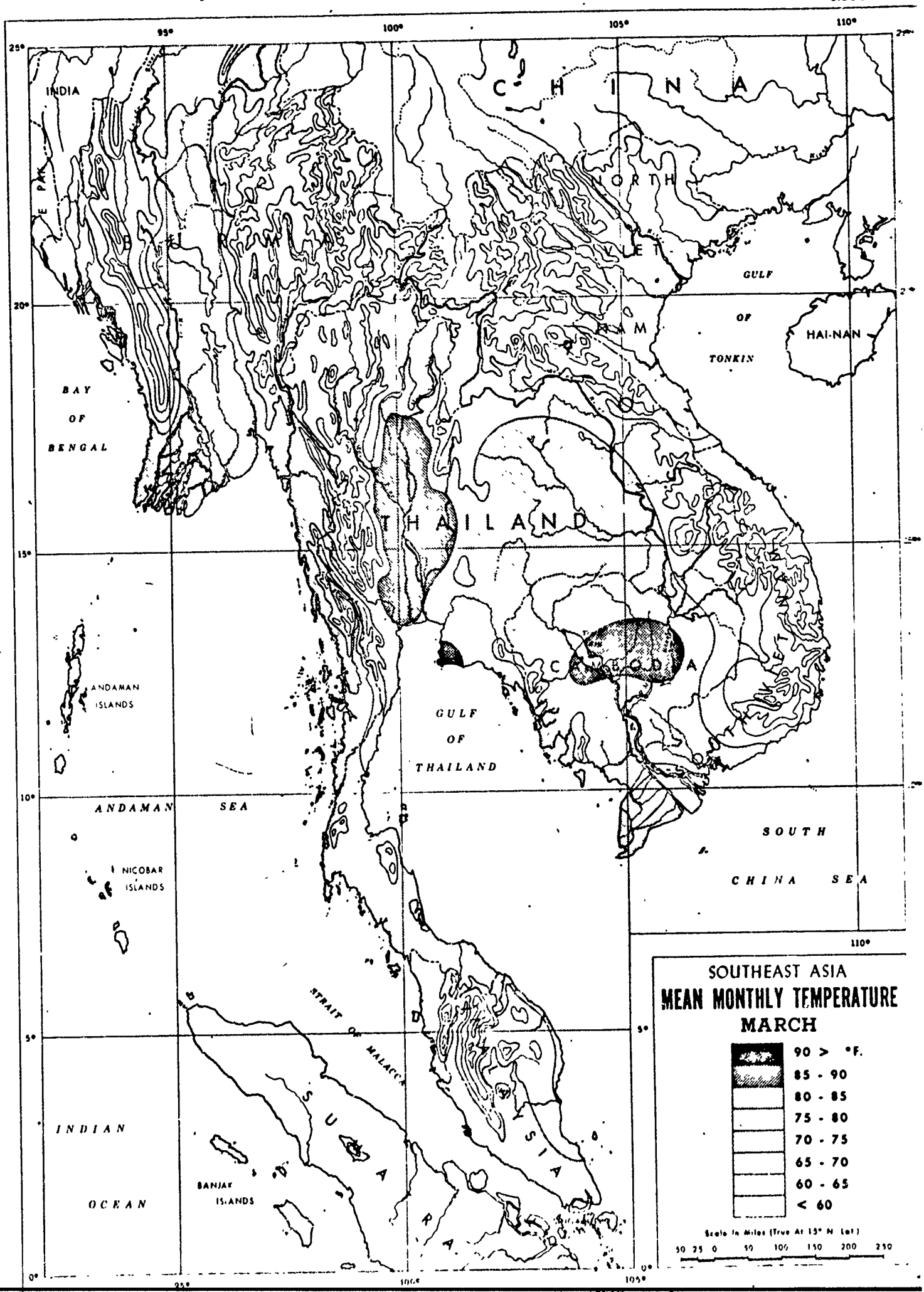

SOUTHEAST ASIA
STATION LOCATIONS
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
LAOS
THAILAND
CAMBODIA
SOUTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
ANDAMAN ISLANDS
NICOBAR ISLANDS
GULF OF THAILAND
ANDAMAN SEA
SOUTH CHINA SEA
INDIAN OCEAN
BANJAK ISLANDS
STRAIT OF MALACCA
SUMATRA
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

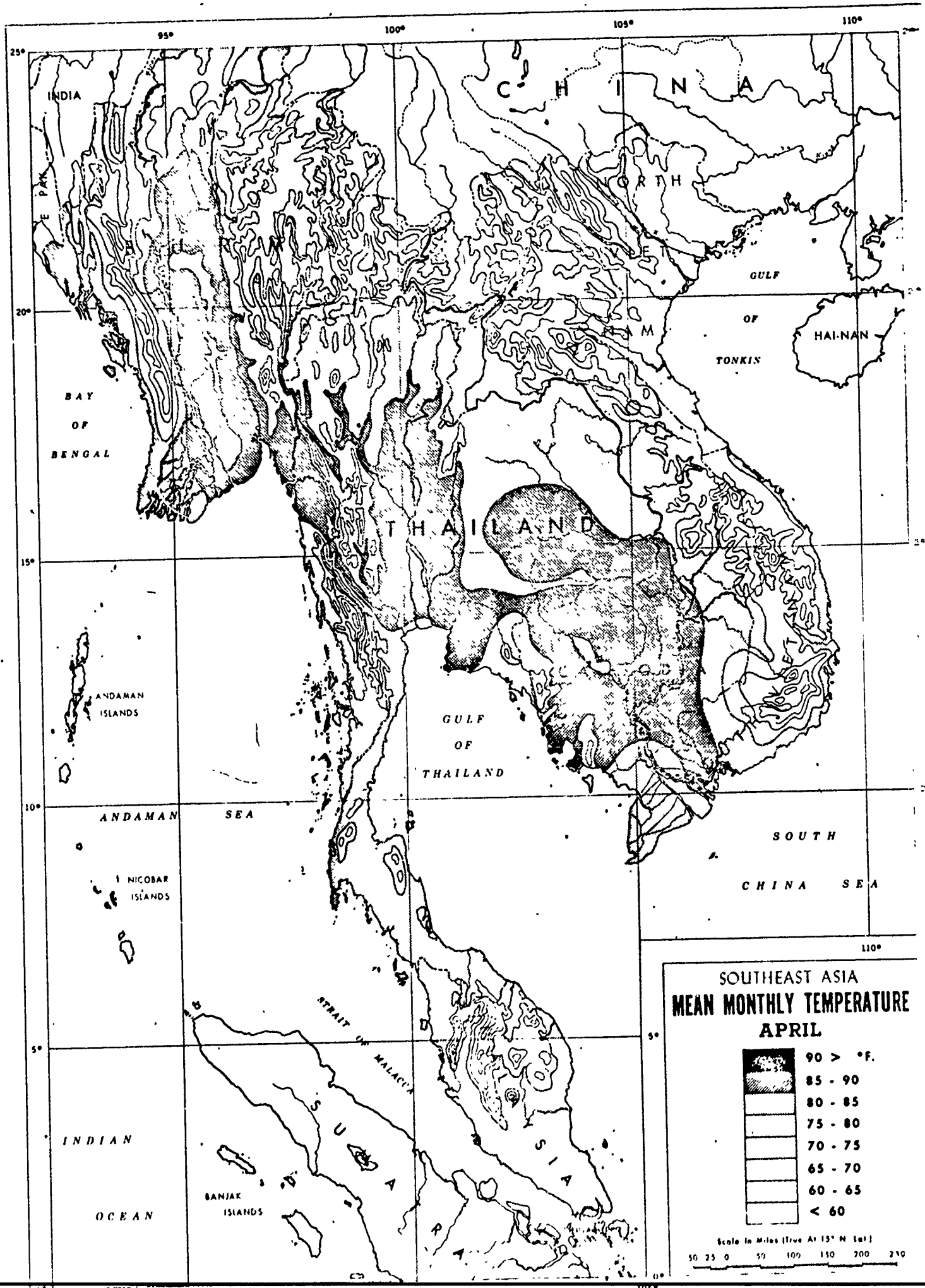
MAP 3

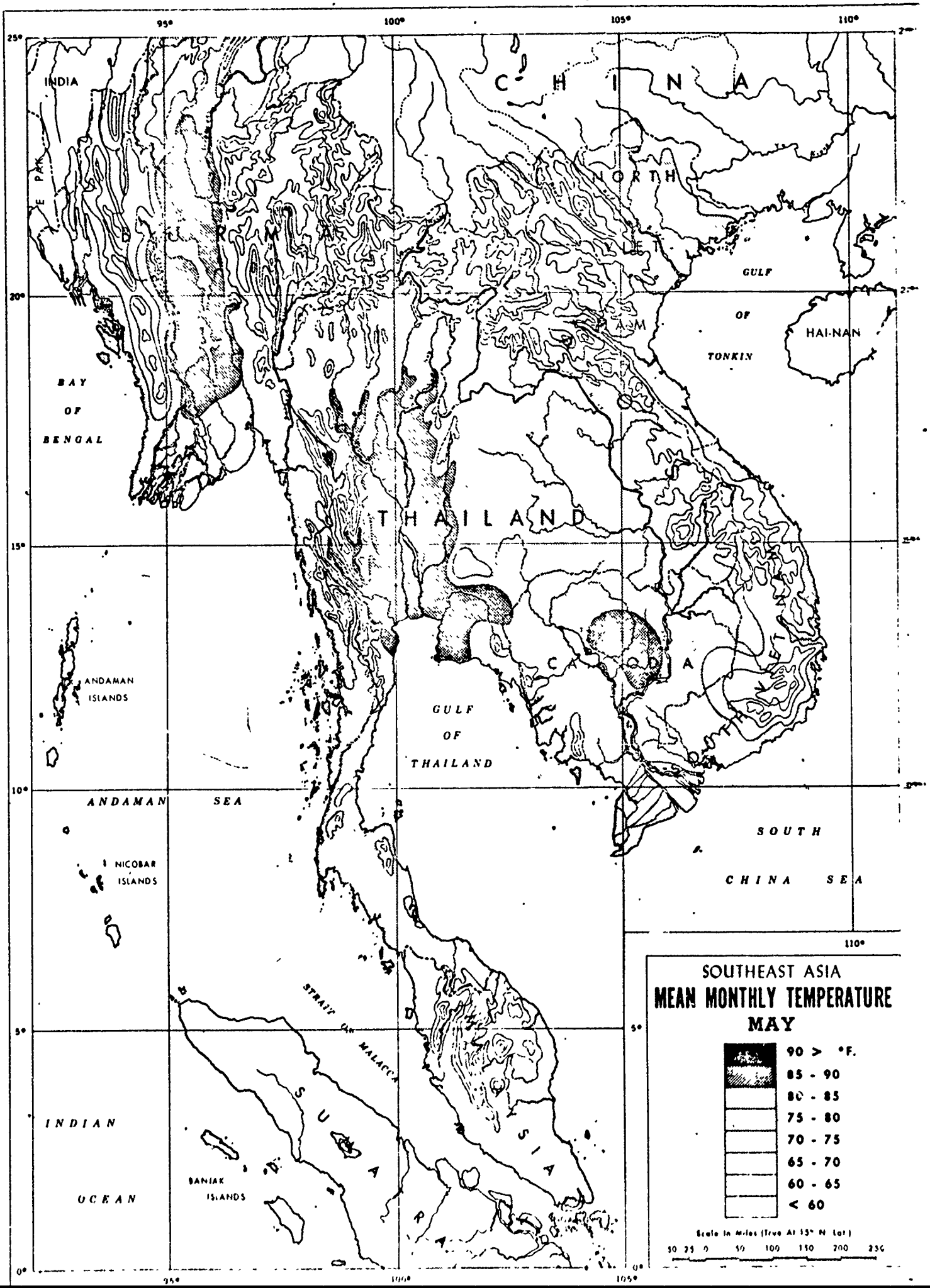

SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
JANUARY
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale in Miles (True At 15° N. Lat.)
10 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN OCEAN
BANJAR ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

MAP 4

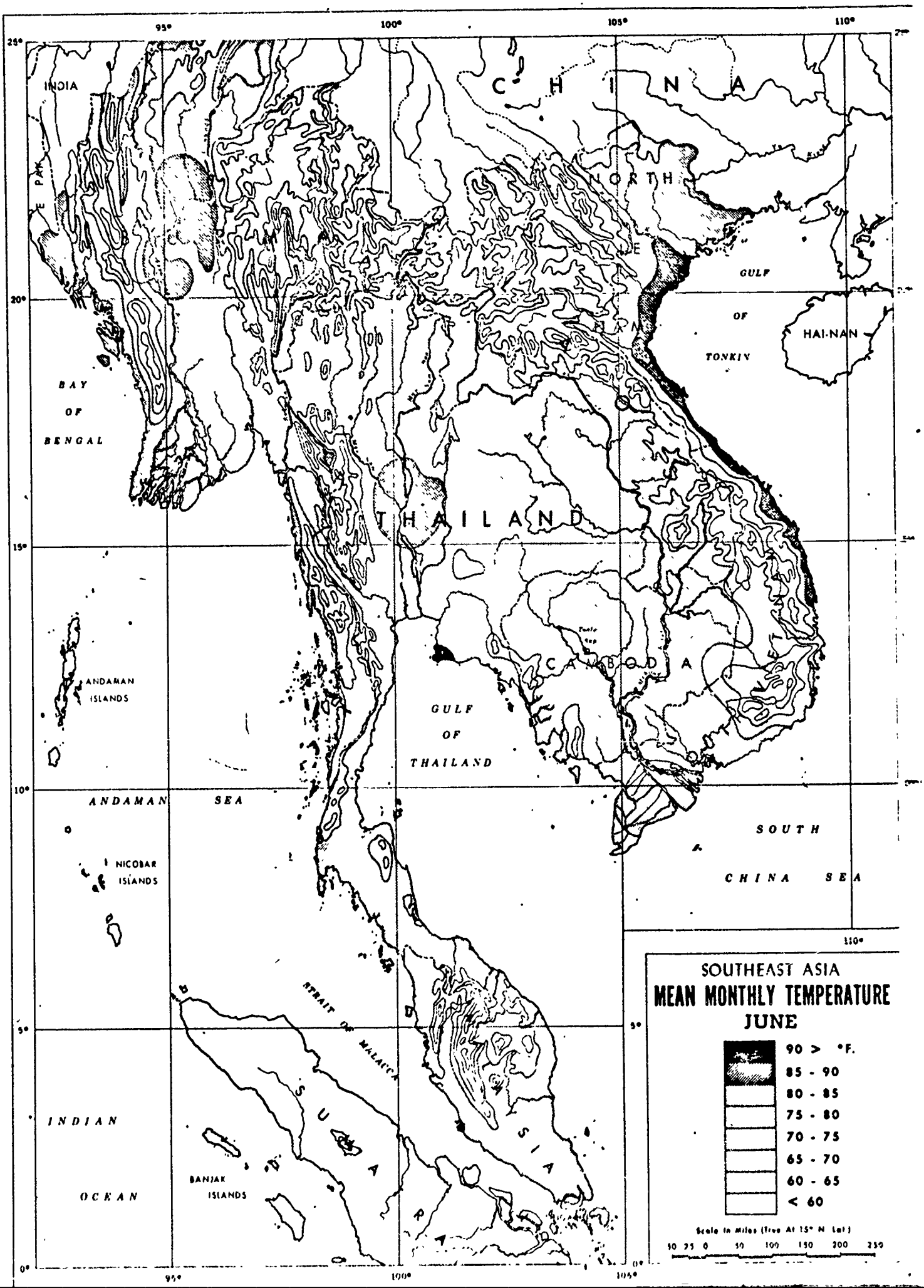

SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
FEBRUARY
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale In Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
CHINA
INDIA
NORTH
VIETNAM
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
SUMATRA
INDIAN
OCEAN
BANJAK
ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

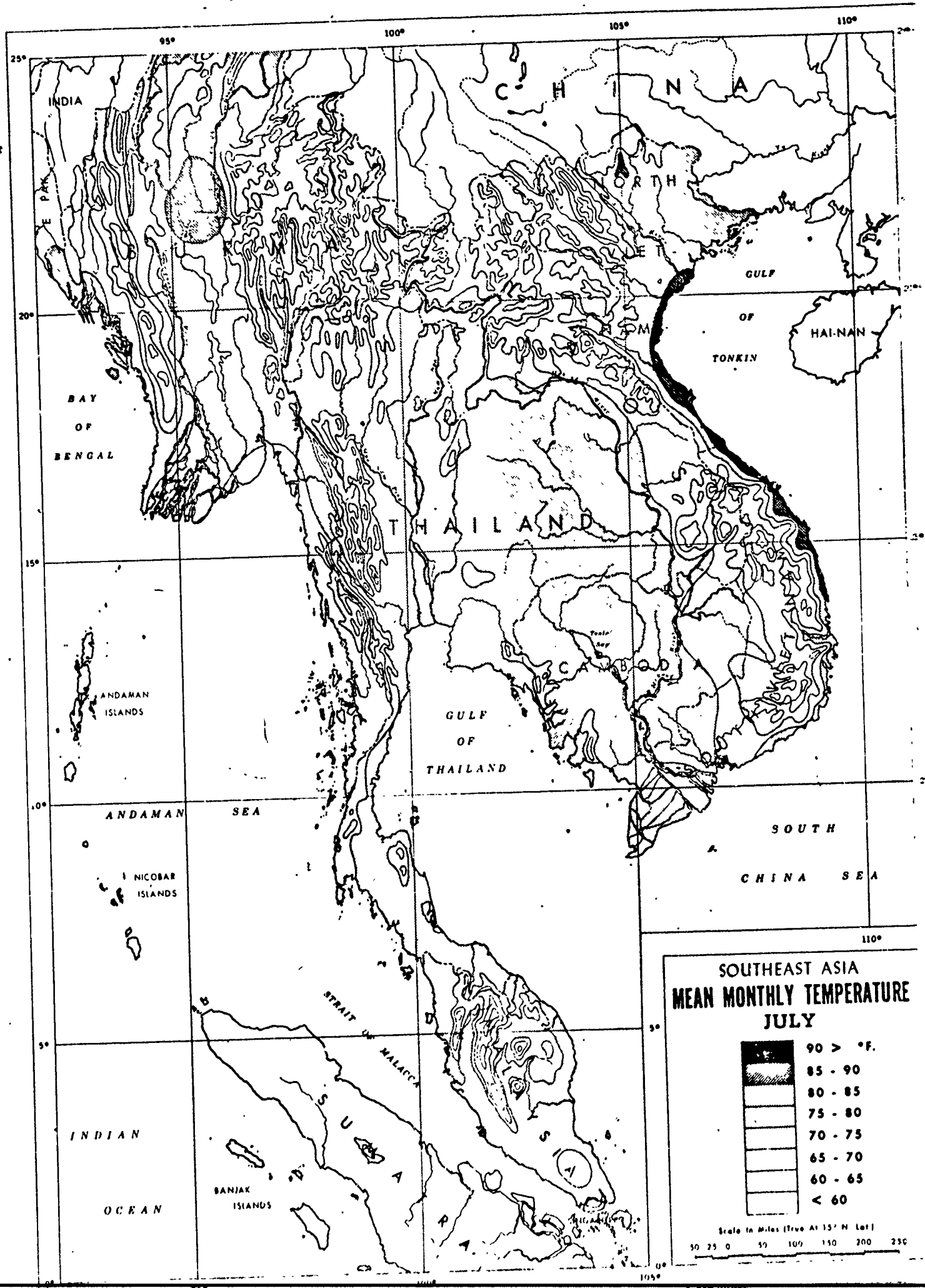

SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
MARCH
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale In Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
CHINA
INDIA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN OCEAN
BANJAR ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°


SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
APRIL
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale in Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
NORTH
VIETNAM
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
SOUTH
CHINA
SEA
NICOBAR
ISLANDS
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN
OCEAN
BANJAK
ISLANDS

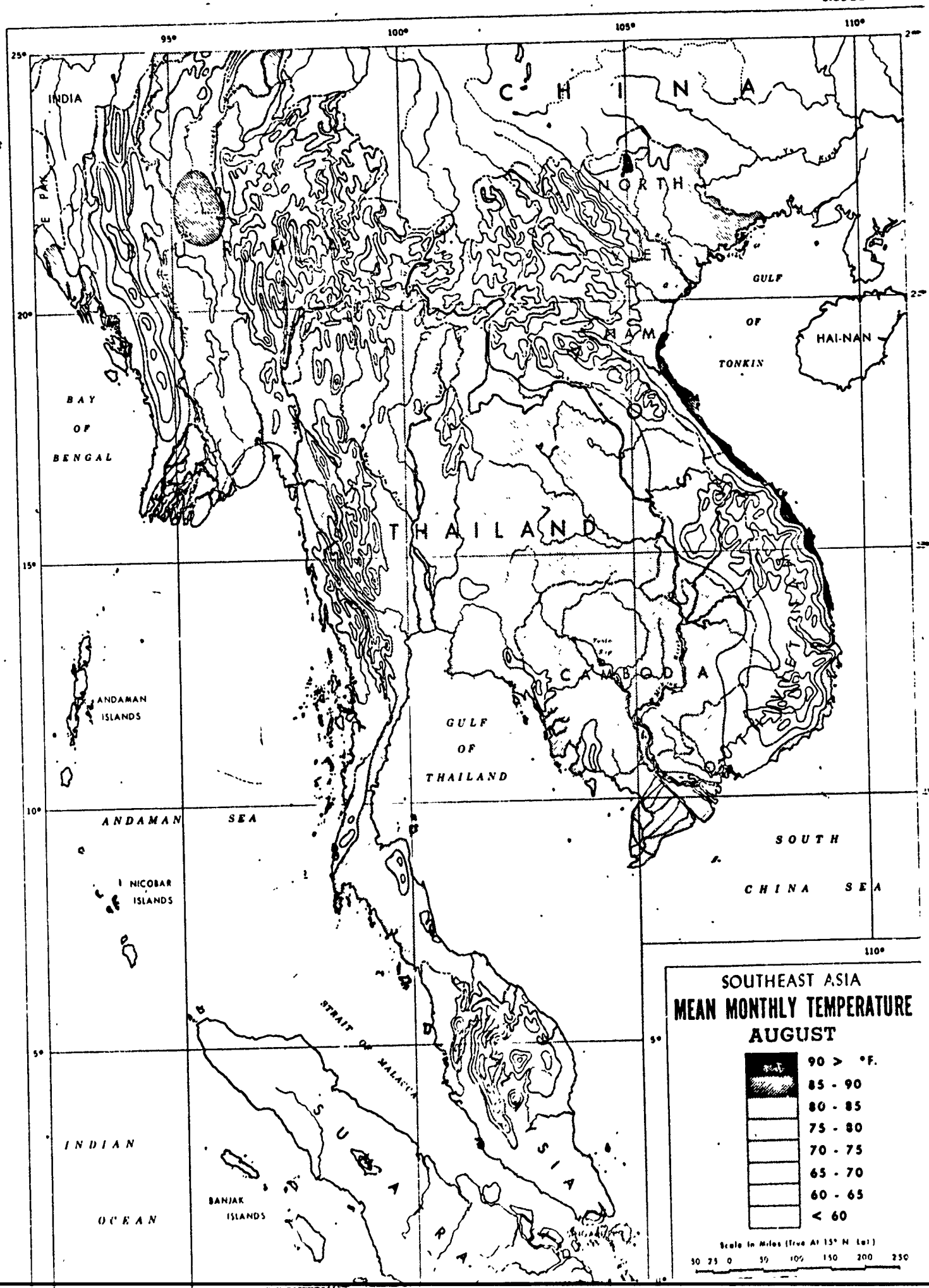

SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
MAY
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale in Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
CHINA
INDIA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
SOUTH VIETNAM
GULF OF THAILAND
ANDAMAN ISLANDS
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANIAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

MAP 8

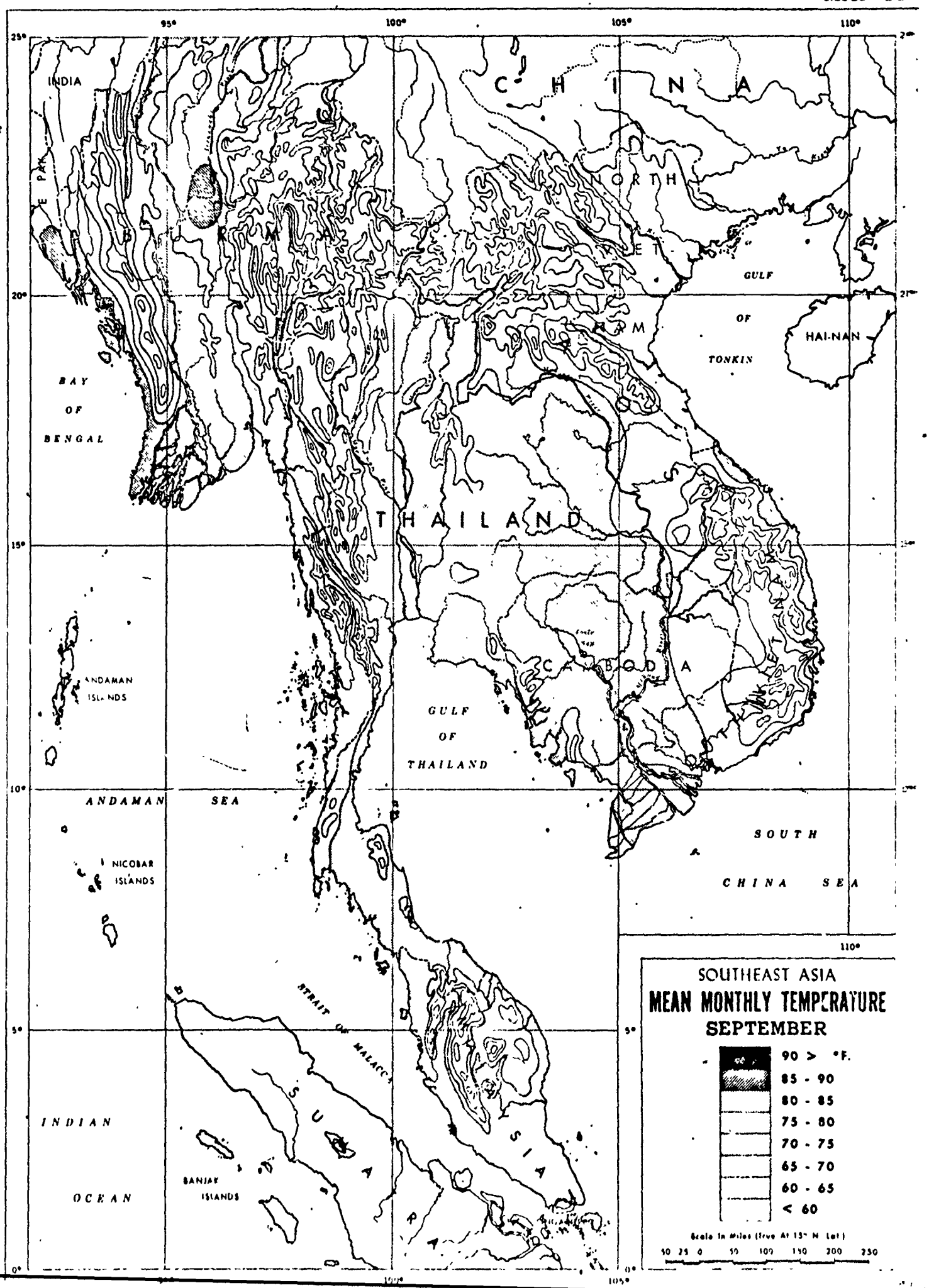

SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
JUNE
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale in Miles (Free At 15° N Lat)
50 25 0 50 100 150 200 250
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
NORTH
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
SOUTH
CHINA
SEA
NICOBAR
ISLANDS
STRAIT OF MALACCA
SUMATRA
INDIAN
OCEAN
BANJAK
ISLANDS

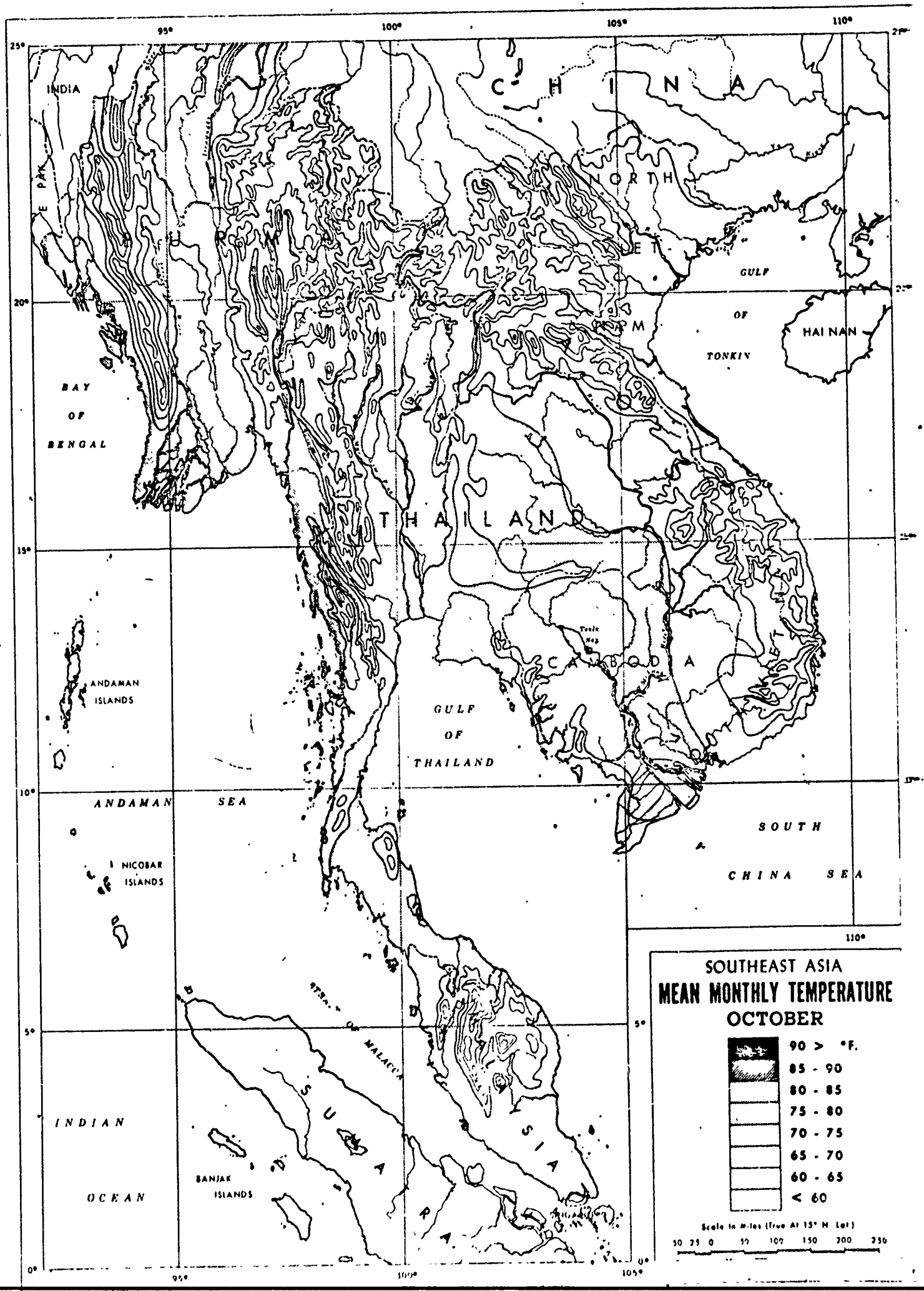

SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
JULY
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale in Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
CHINA
INDIA
NORTH
VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

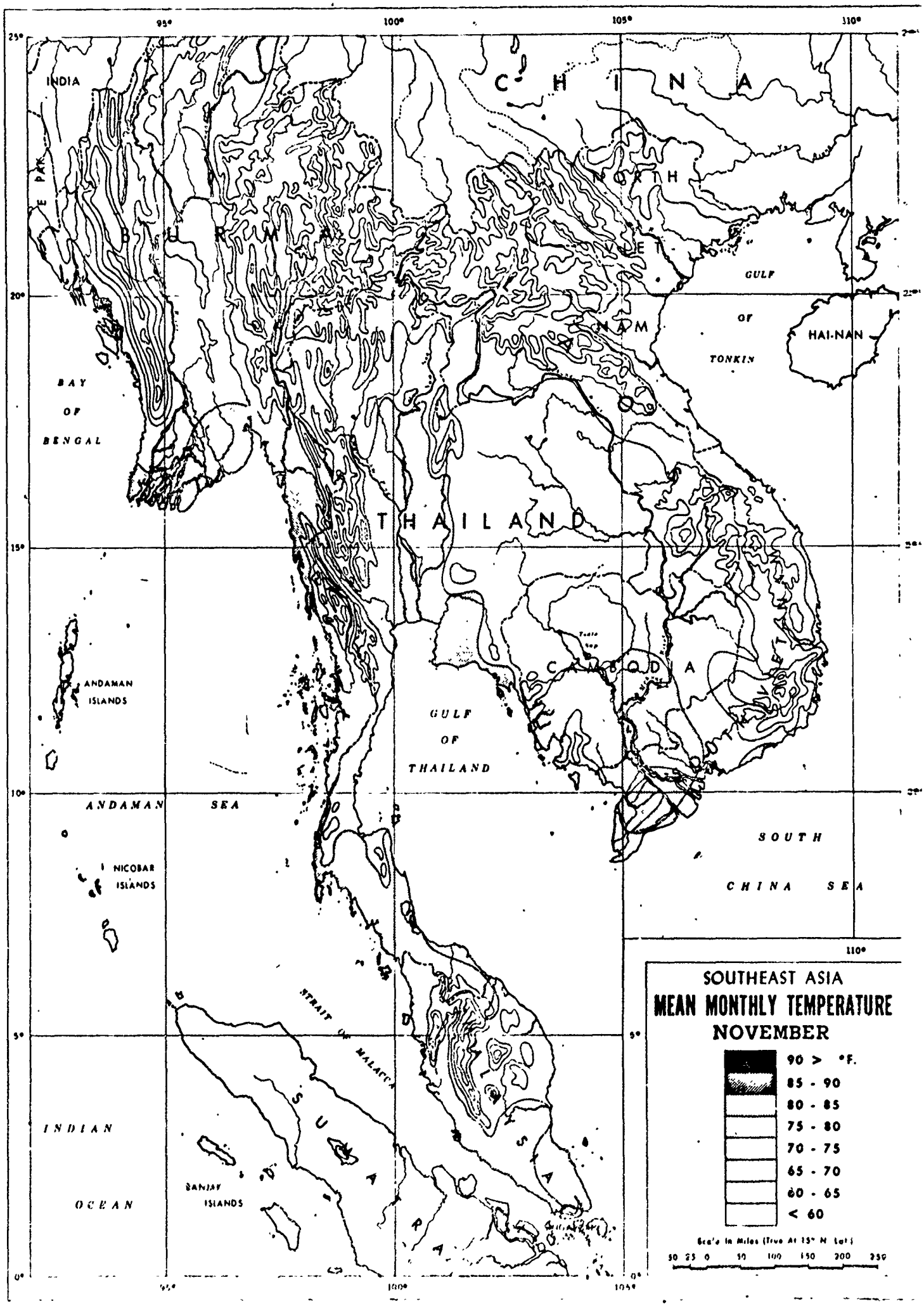
MAP 10


SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
AUGUST
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
95°
100°
105°
110°
25°
20°
15°
10°
5°
INDIA
CHINA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANJAK ISLANDS

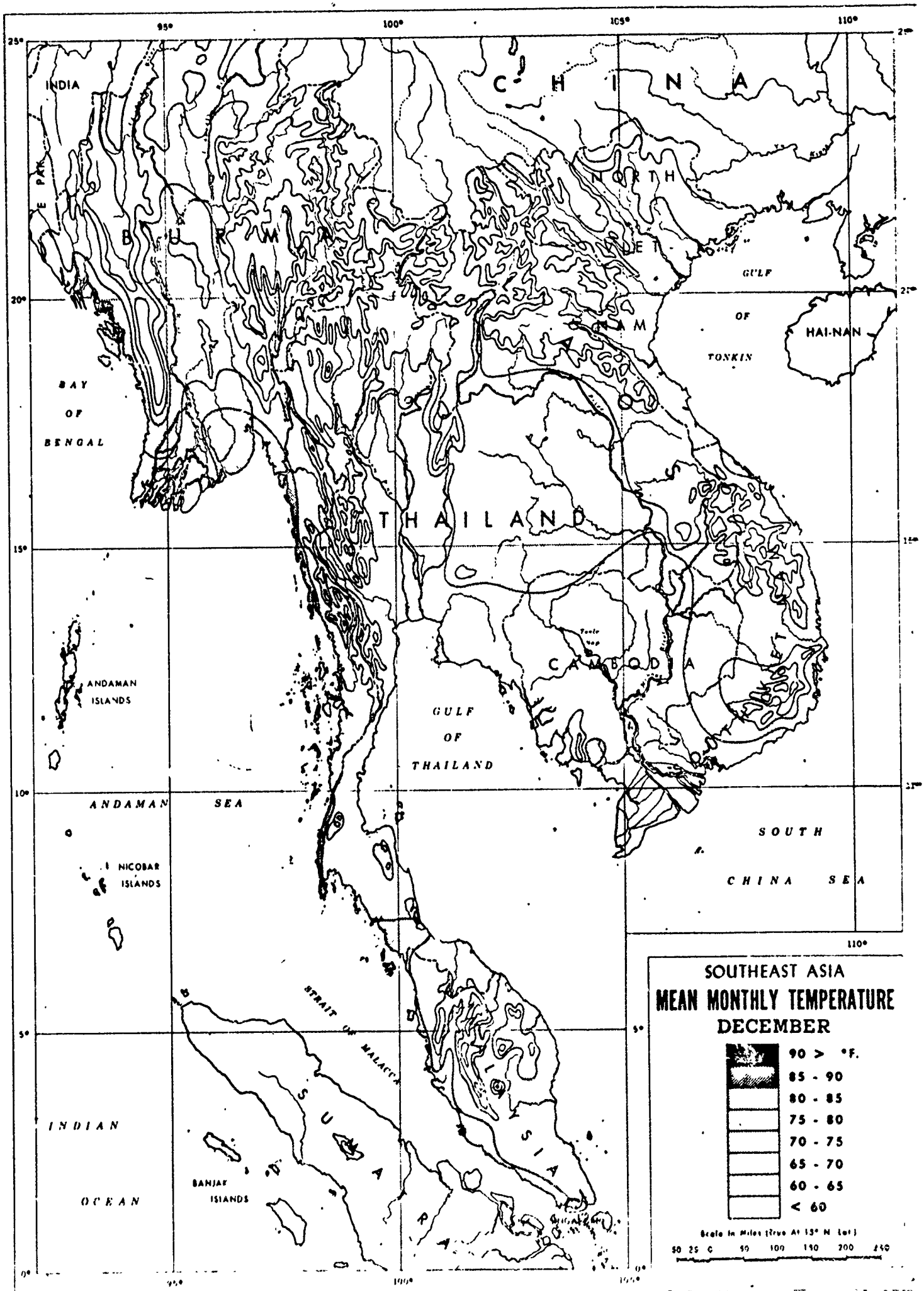
MAP 11


SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
SEPTEMBER
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale In Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
NORTH
VIETNAM
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
SUMATRA
INDIAN
OCEAN
BANJAK
ISLANDS


SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
OCTOBER
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
CHINA
INDIA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI NAN
BAY OF BENGAL
THAILAND
CAMBODIA
GULF OF THAILAND
ANDAMAN ISLANDS
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

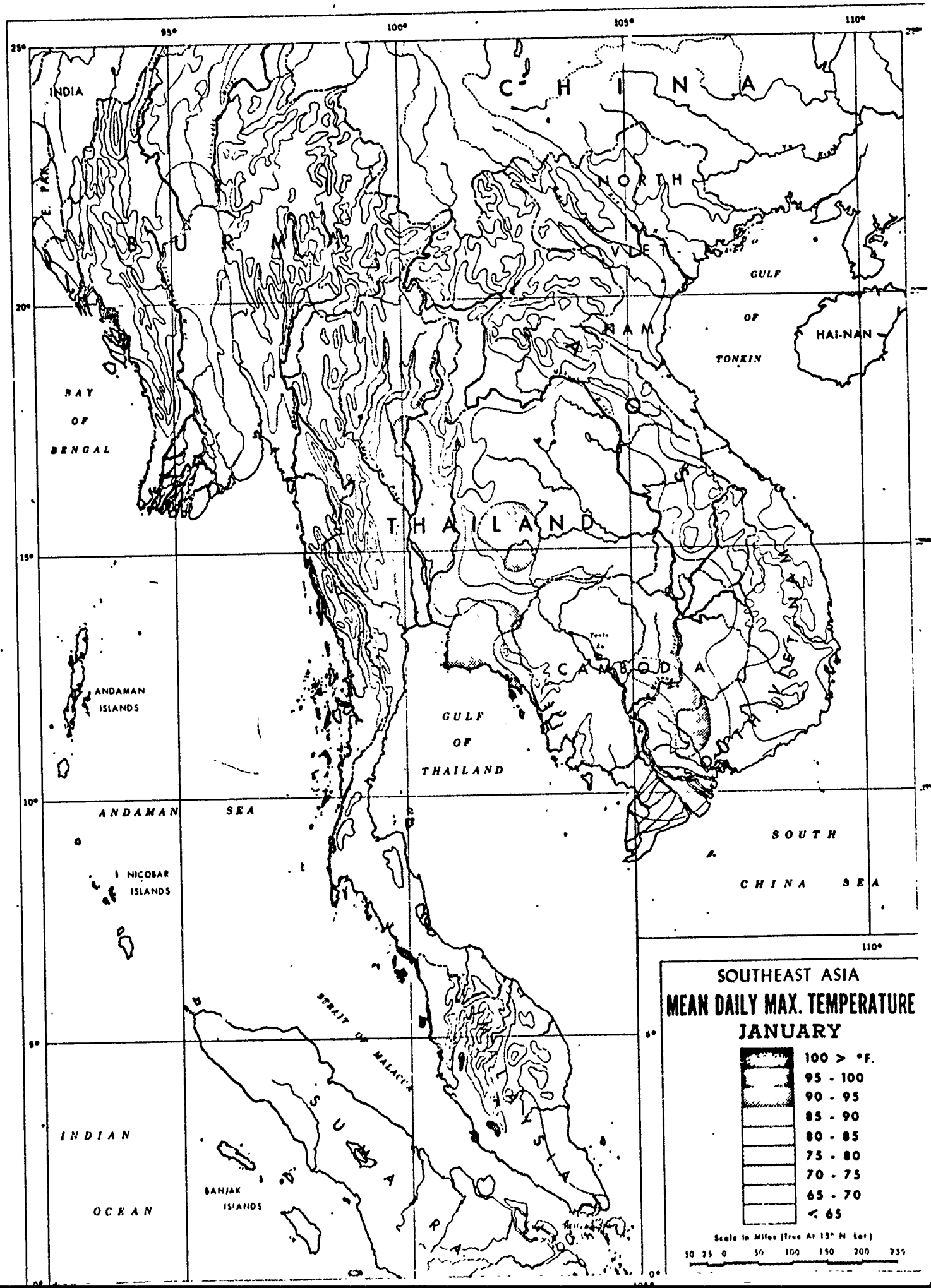

SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
NOVEMBER
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale In Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
CHINA
INDIA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
GULF OF THAILAND
ANDAMAN ISLANDS
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
BORNEO
INDIAN OCEAN
BANJAR ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

MAP 14

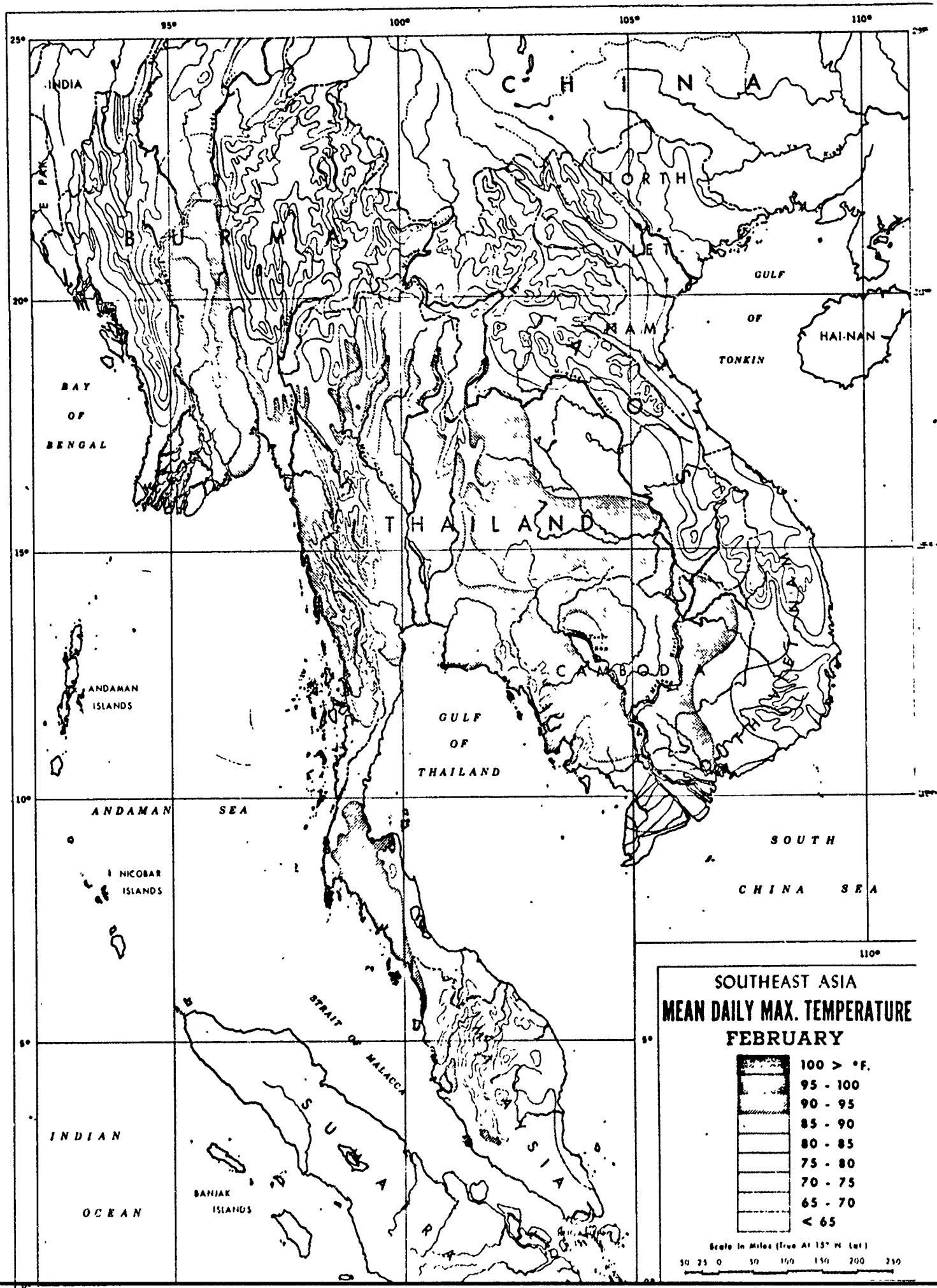

SOUTHEAST ASIA
MEAN MONTHLY TEMPERATURE
DECEMBER
90 > °F.
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
60 - 65
< 60
Scale in Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
CHINA
INDIA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN OCEAN
BANJAR ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

MEAN DAILY MAXIMUM TEMPERATURE

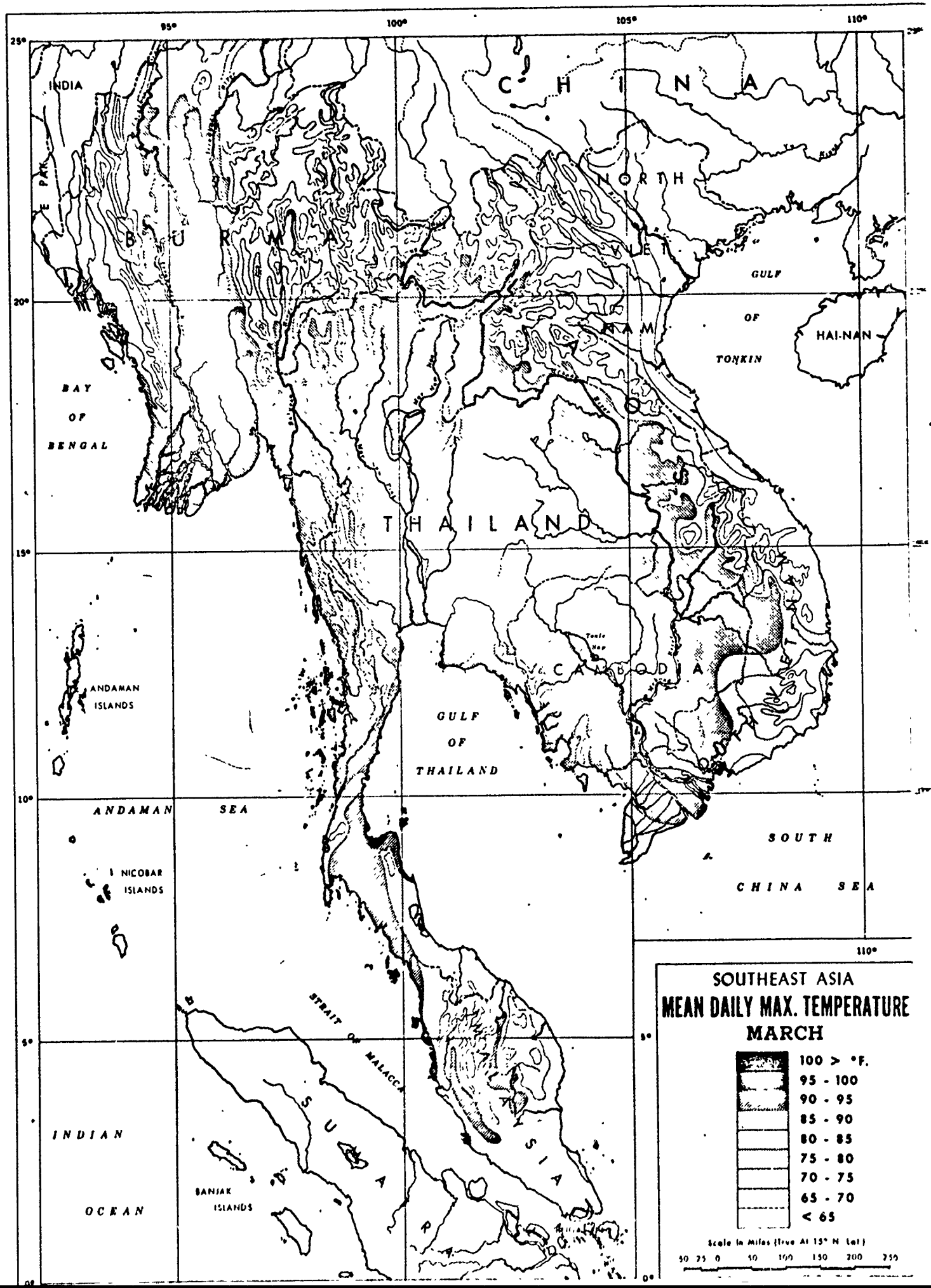
MAP 15


SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
JANUARY
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
NORTH
VIET
NAM
BURMA
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
CAMBODIA
SOUTH VIETNAM
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
SOUTH
CHINA
SEA
NICOBAR
ISLANDS
STRAIT OF MALACCA
SUMATRA
INDIAN
OCEAN
BANJAK
ISLANDS

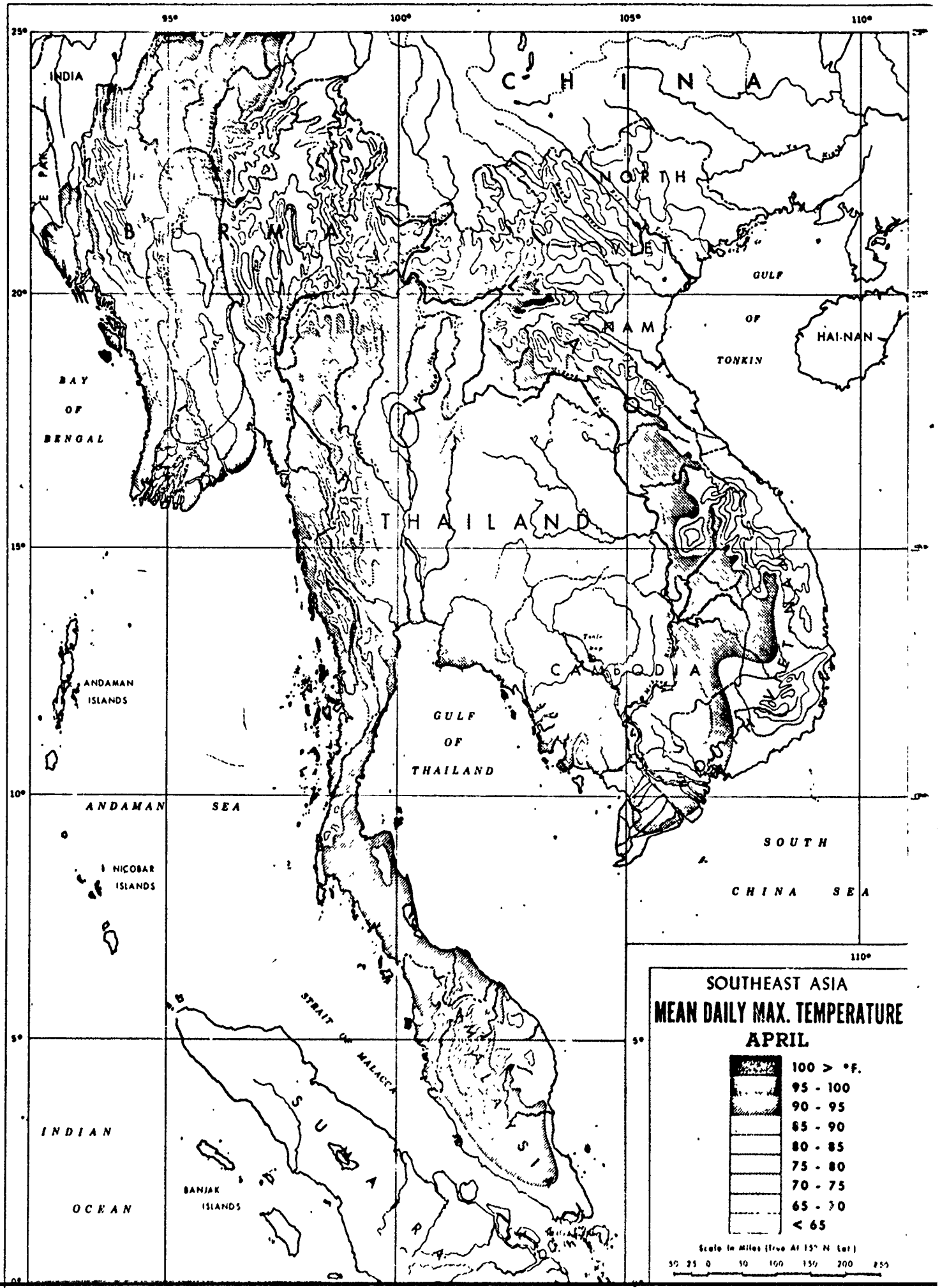
MAP 16


95°
100°
105°
110°
25°
20°
15°
10°
5°
INDIA
CHINA
NORTH
BURMA
VIET
GULF
OF
TONKIN
HAI-NAN
LAOS
BAY
OF
BENGAL
THAILAND
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
SOUTH
CHINA
SEA
NICOBAR
ISLANDS
STRAIT OF MALACCA
SUMATRA
INDIAN
OCEAN
BANJAK
ISLANDS
SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
FEBRUARY
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale In Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250

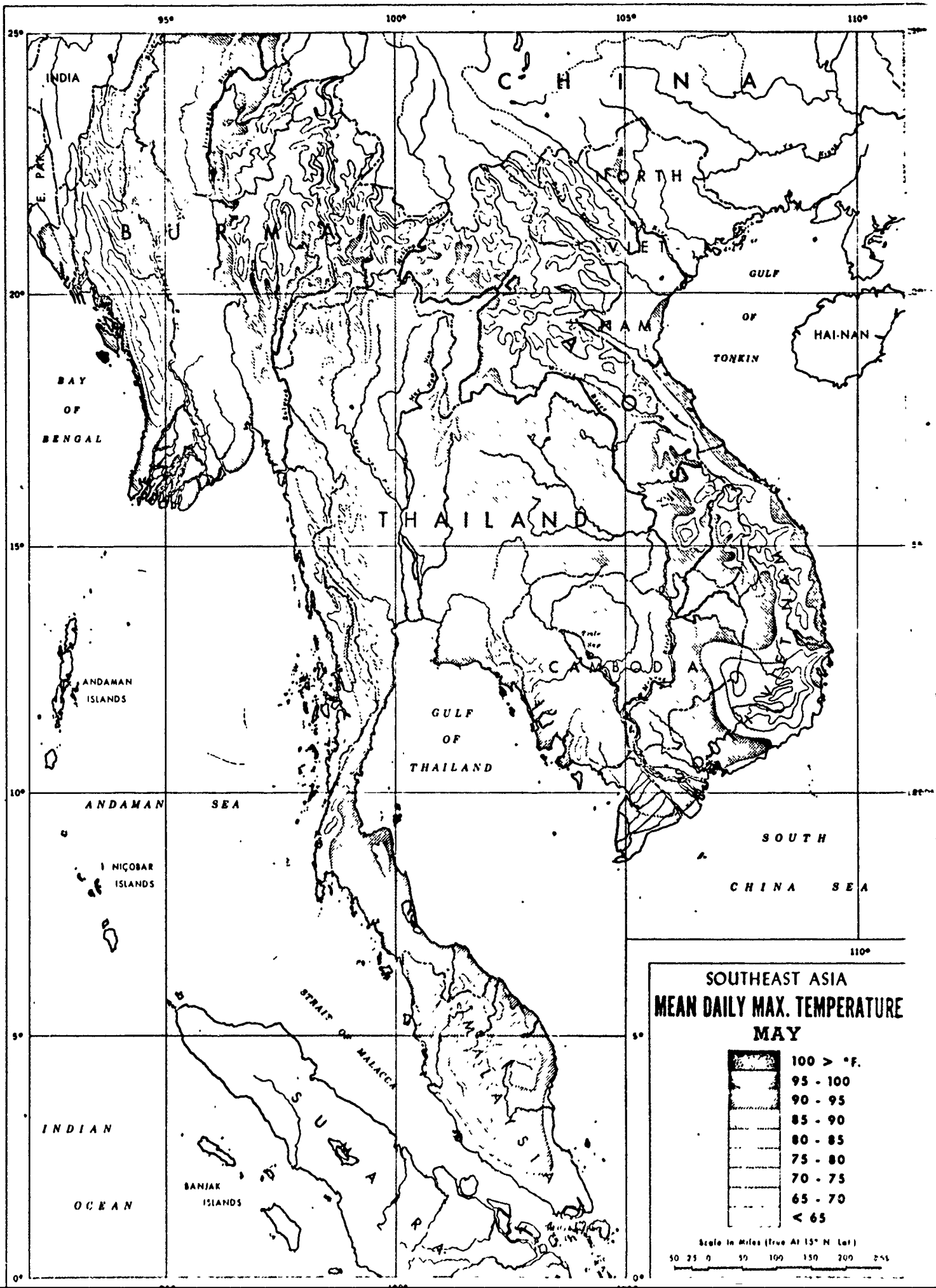
MAP 17


95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
NORTH
VIET
NAM
BURMA
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
SOUTH
CHINA
SEA
NICOBAR
ISLANDS
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN
OCEAN
BANJAK
ISLANDS
SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
MARCH
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250

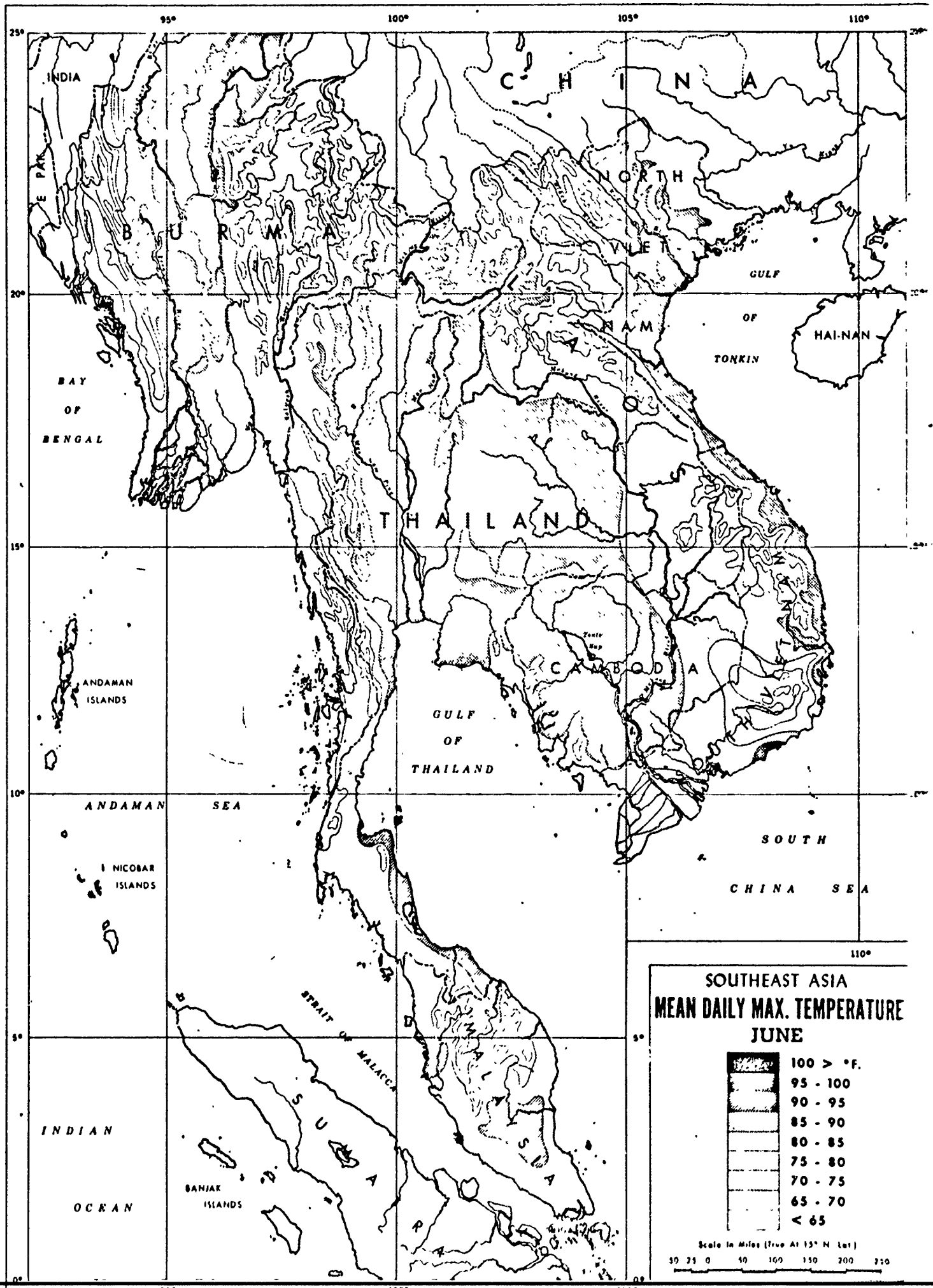
MAP 18


95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
C H I N A
NORTH
B U R M A
VIET
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
T H A I L A N D
ANDAMAN
ISLANDS
CAMBODIA
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
INDIAN
OCEAN
BANJAK
ISLANDS
SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
APRIL
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale in Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250

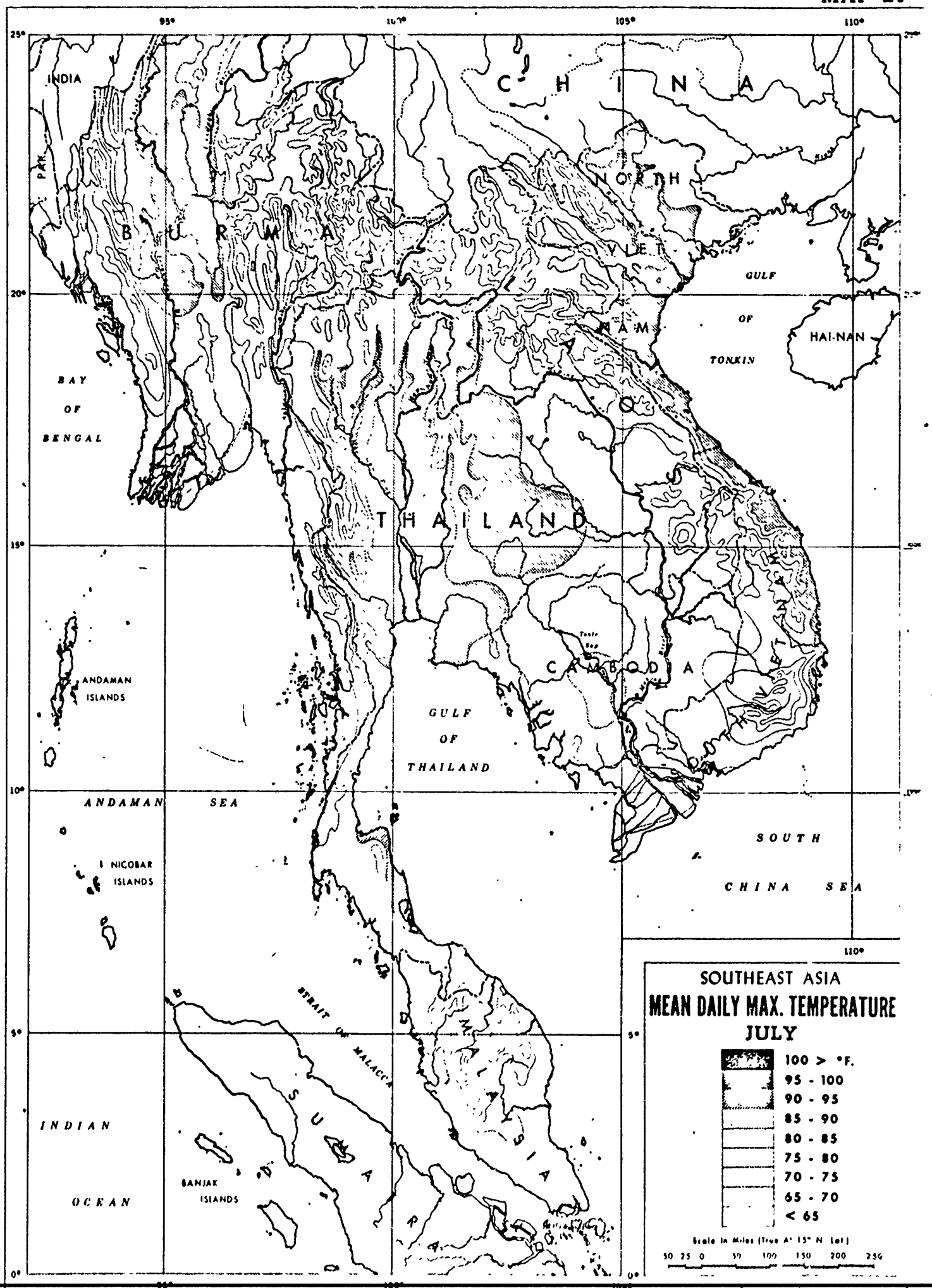
MAP 19


95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
NORTH
VIET
NAM
BURMA
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
SOUTH
CHINA
SEA
NICOBAR
ISLANDS
STRAIT OF MALACCA
MALAYA
SUMATRA
INDIAN
OCEAN
BANJAK
ISLANDS
SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
MAY
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale In Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250

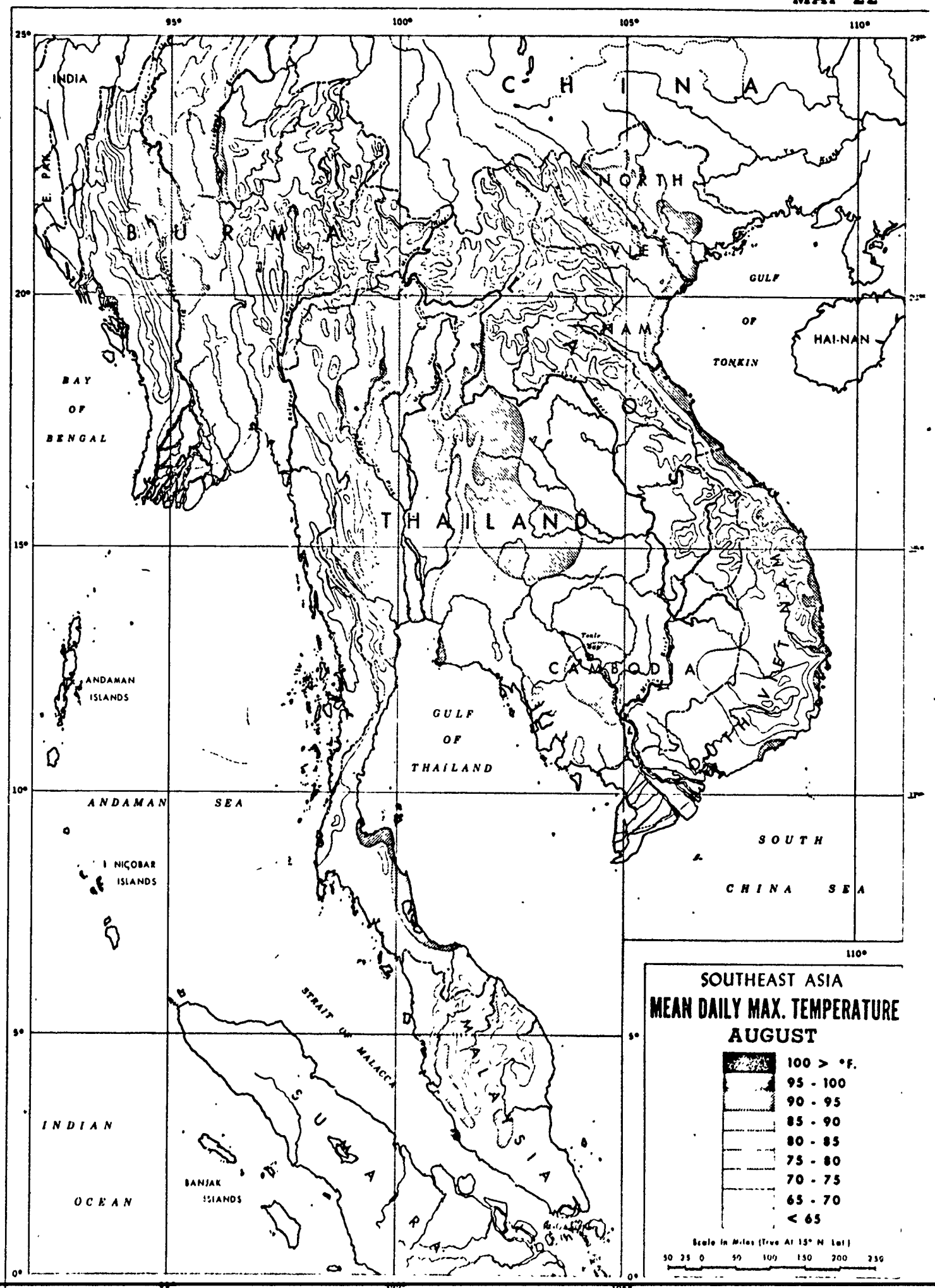
MAP 20


95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
NORTH
BURMA
VIET
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
LAOS
THAILAND
ANDAMAN
ISLANDS
CAMBODIA
GULF
OF
THAILAND
ANDAMAN
SEA
SOUTH
CHINA
SEA
NICOBAR
ISLANDS
STRAIT OF MALACCA
MALAYSIA
SUMATRA
INDIAN
OCEAN
BANJAK
ISLANDS
SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
JUNE
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale In Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250

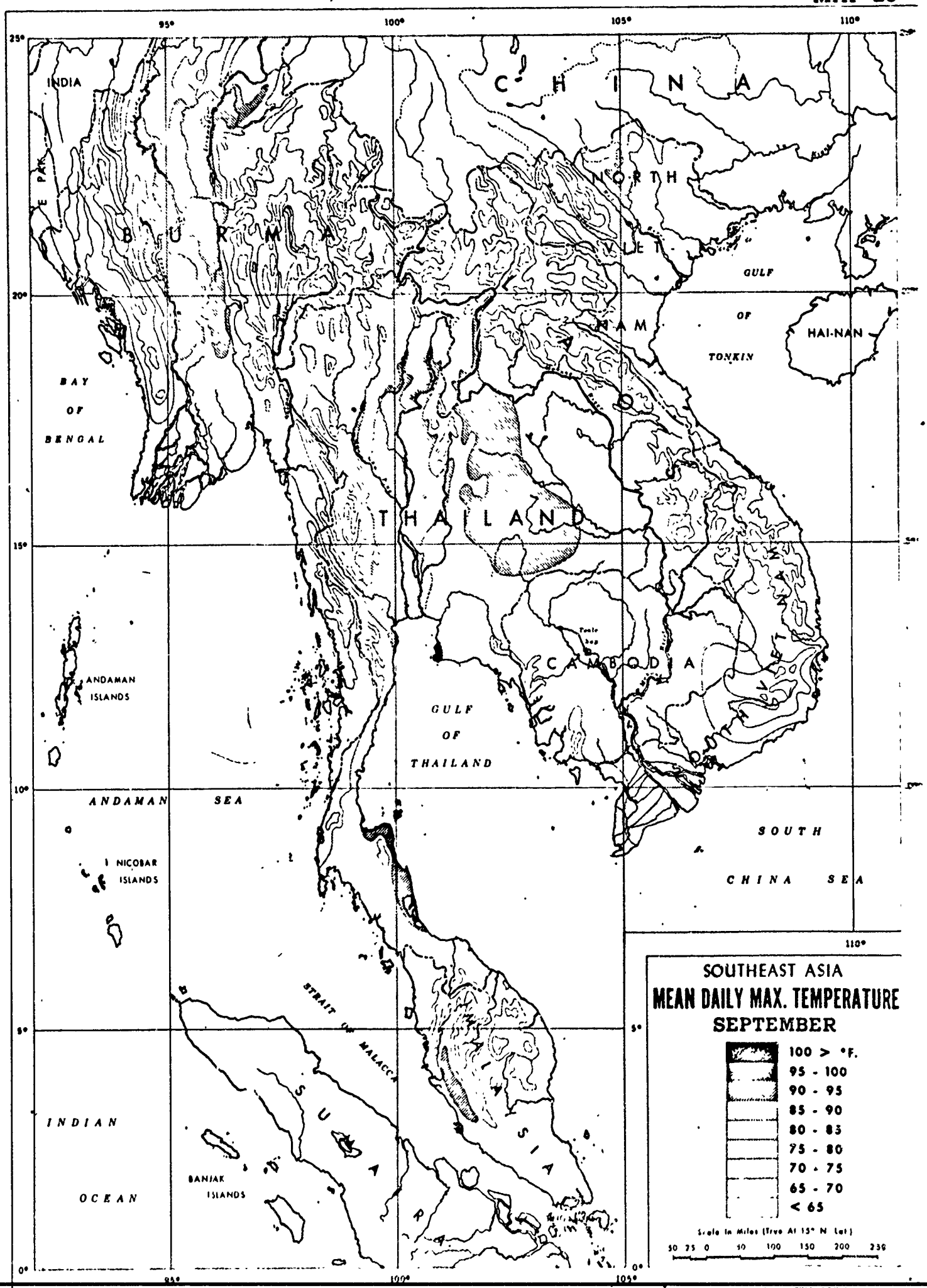
MAP 21

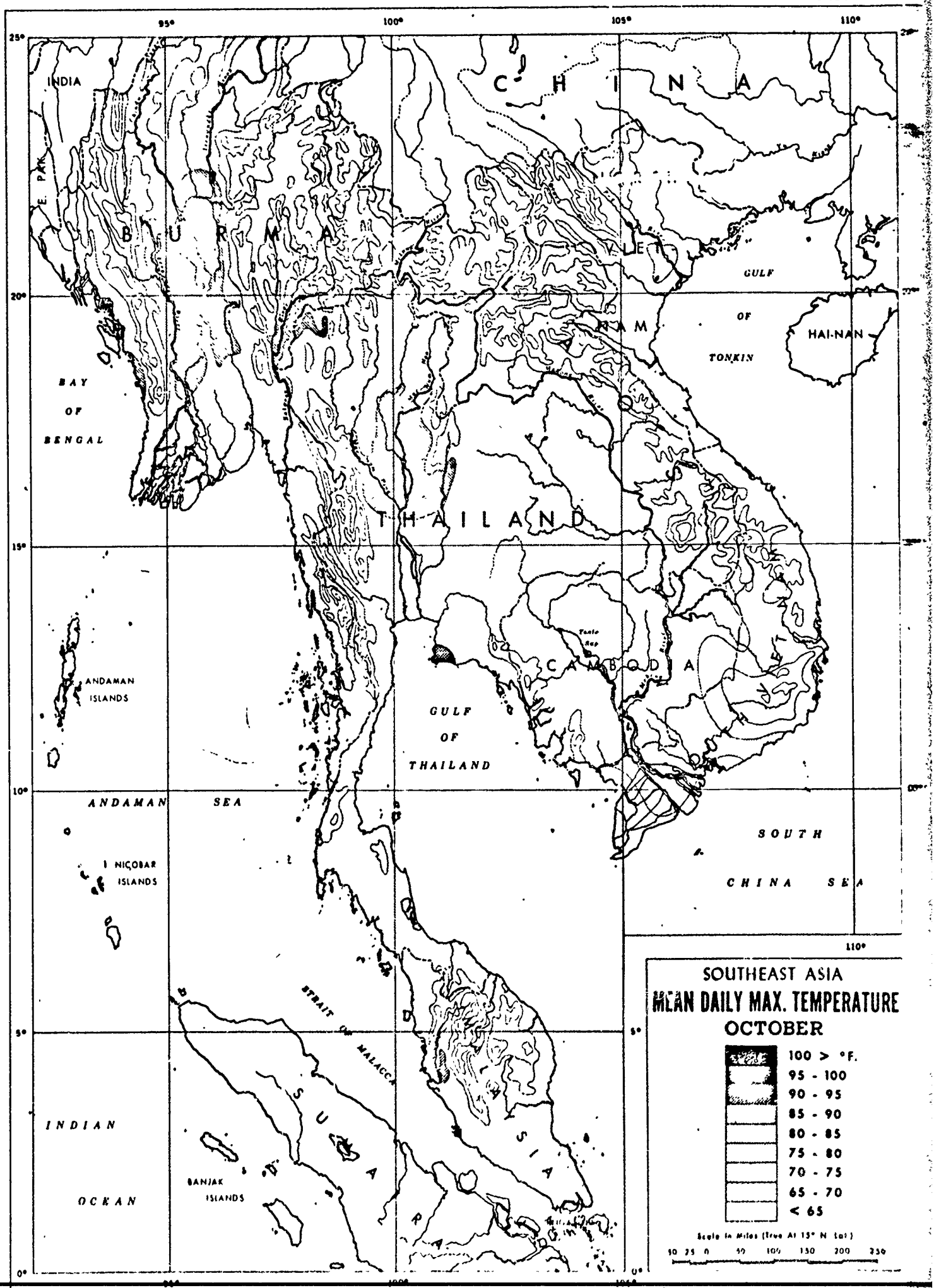

SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
JULY
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale in Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
PAK.
CHINA
NORTH
VIETNAM
BURMA
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
LAOS
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
INDIAN
OCEAN
BANJAK
ISLANDS

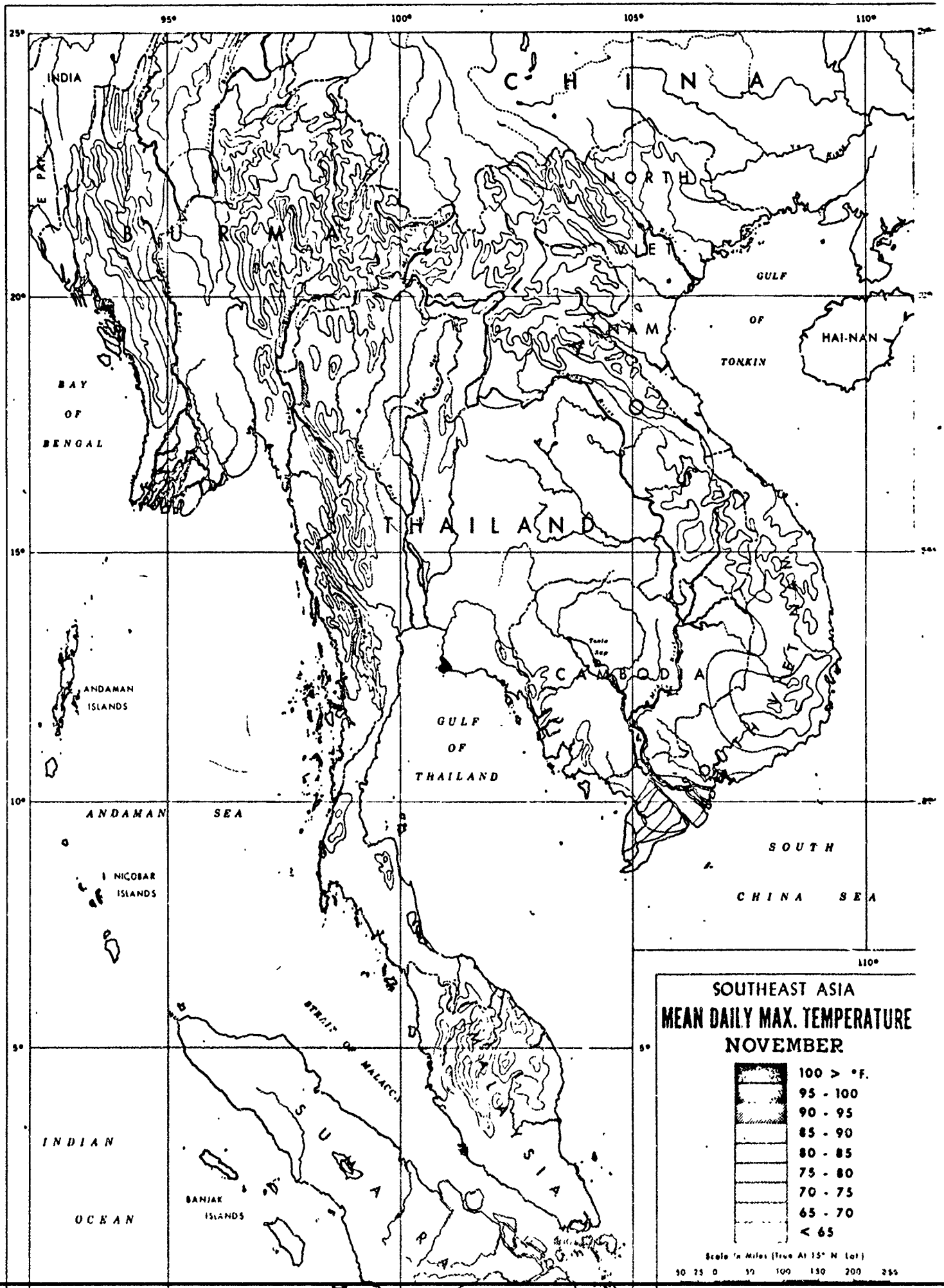
MAP 22

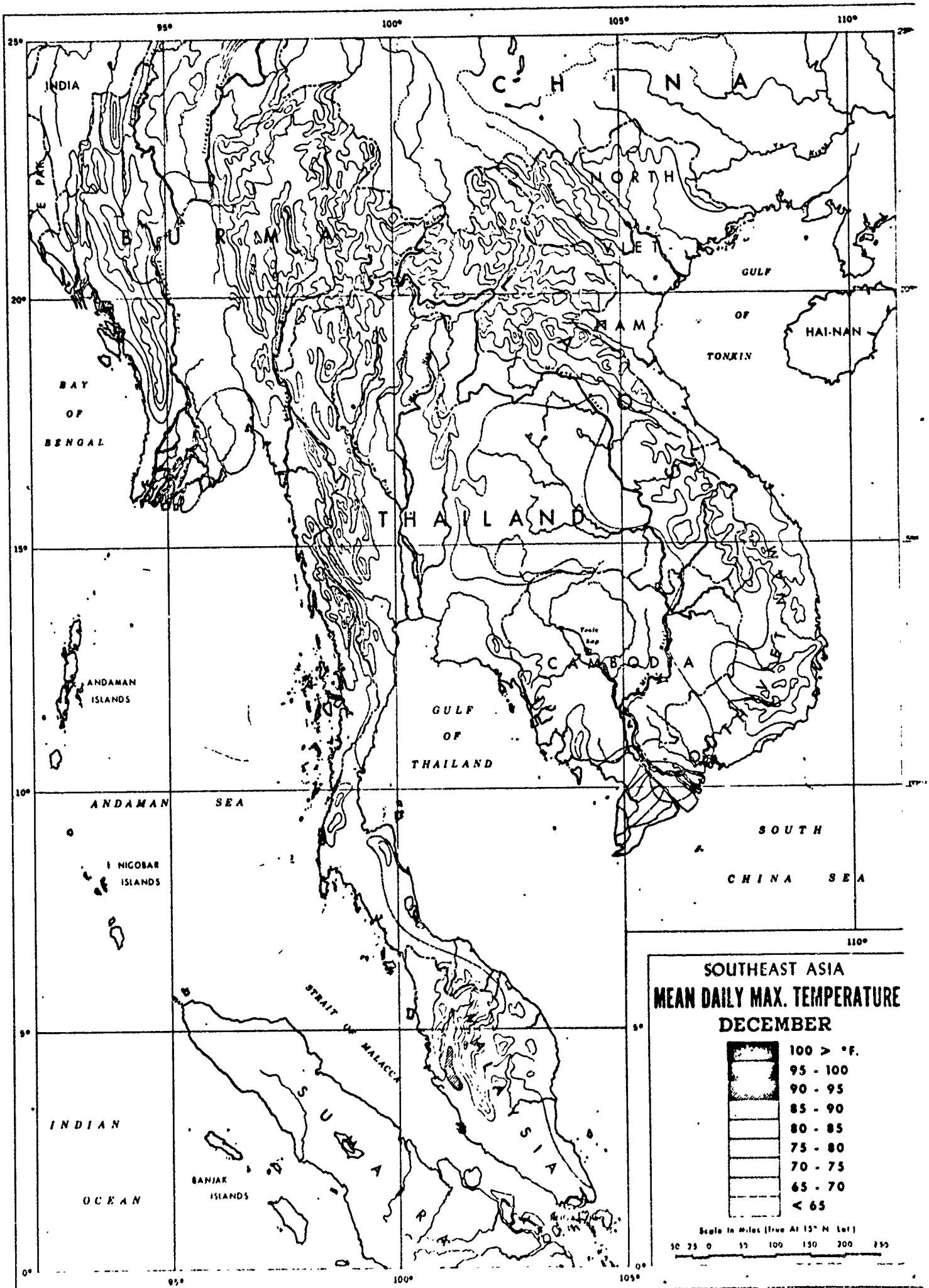

SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
AUGUST
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
BURMA
NORTH
VIET
NAM
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
LAOS
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
INDIAN
OCEAN
BANJAK
ISLANDS

MAP 23

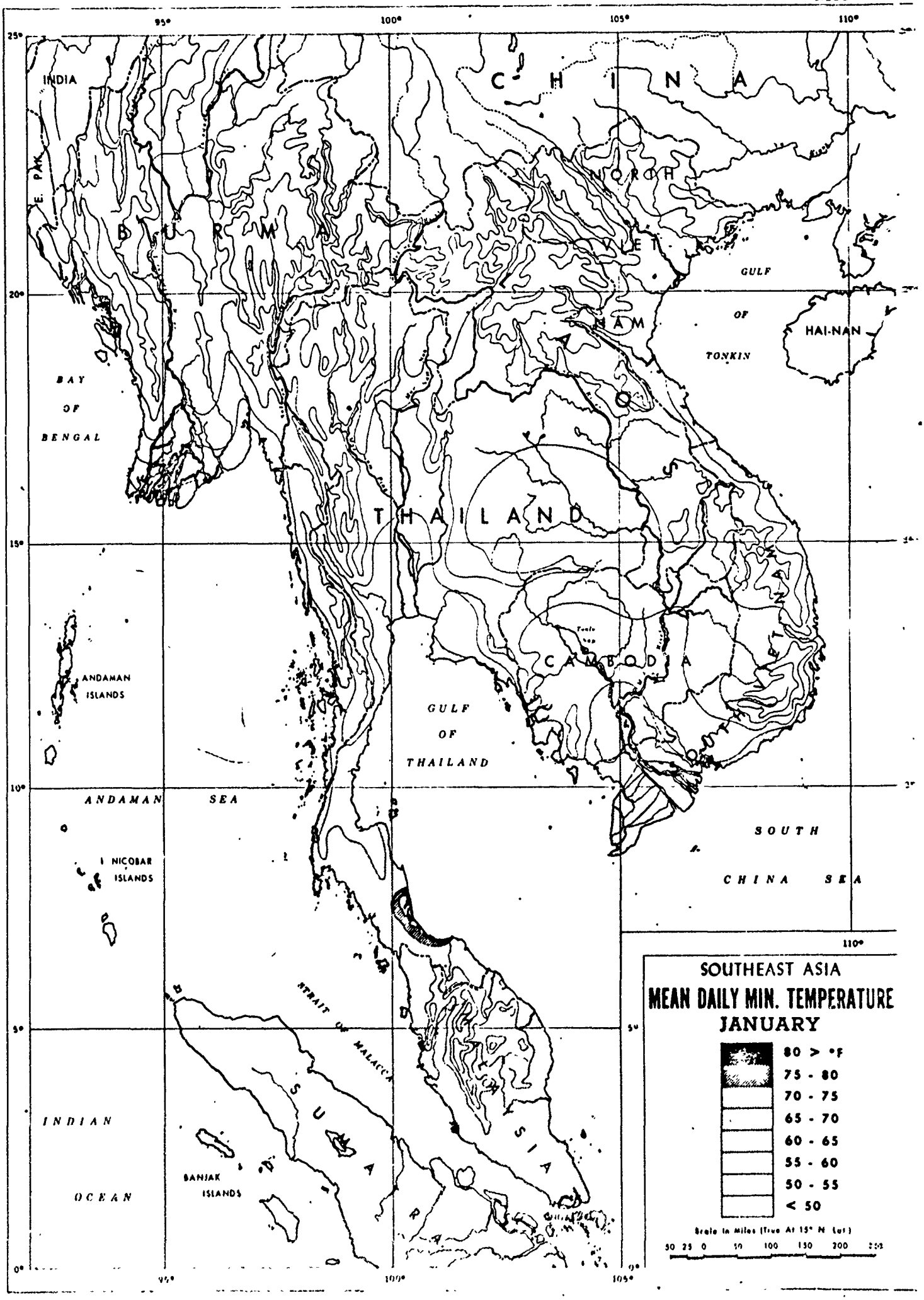

SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
SEPTEMBER
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale In Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
CHINA
INDIA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°


SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
OCTOBER
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale In Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
BURMA
VIET NAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANJAK ISLANDS

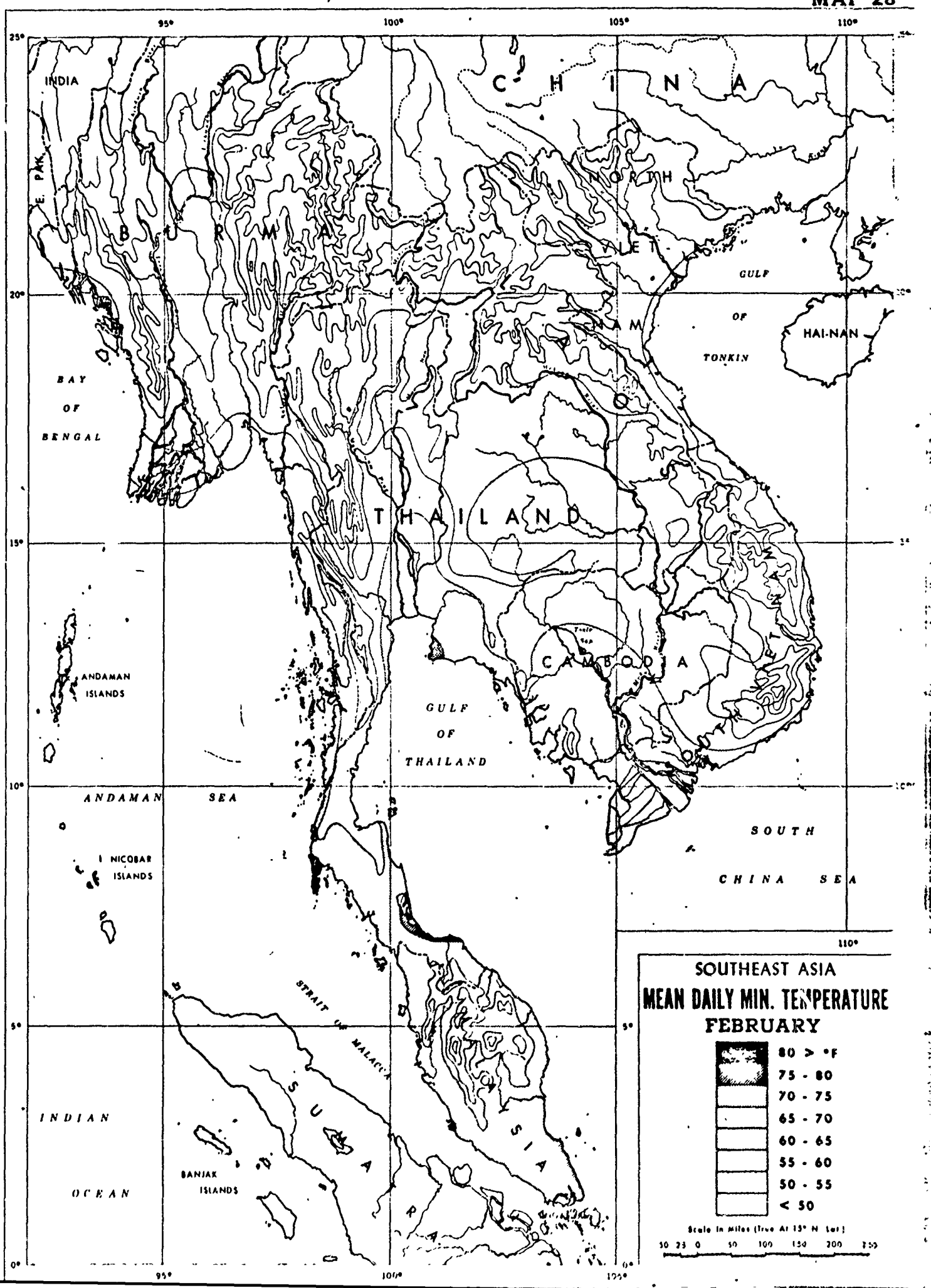

95°
100°
105°
110°
25°
20°
15°
10°
5°
INDIA
C H I N A
B U R M A
NORTH
VIET
NAM
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
T H A I L A N D
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
S U M A T R A
S I A
INDIAN
OCEAN
BANJAK
ISLANDS
SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
NOVEMBER
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale in Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 255

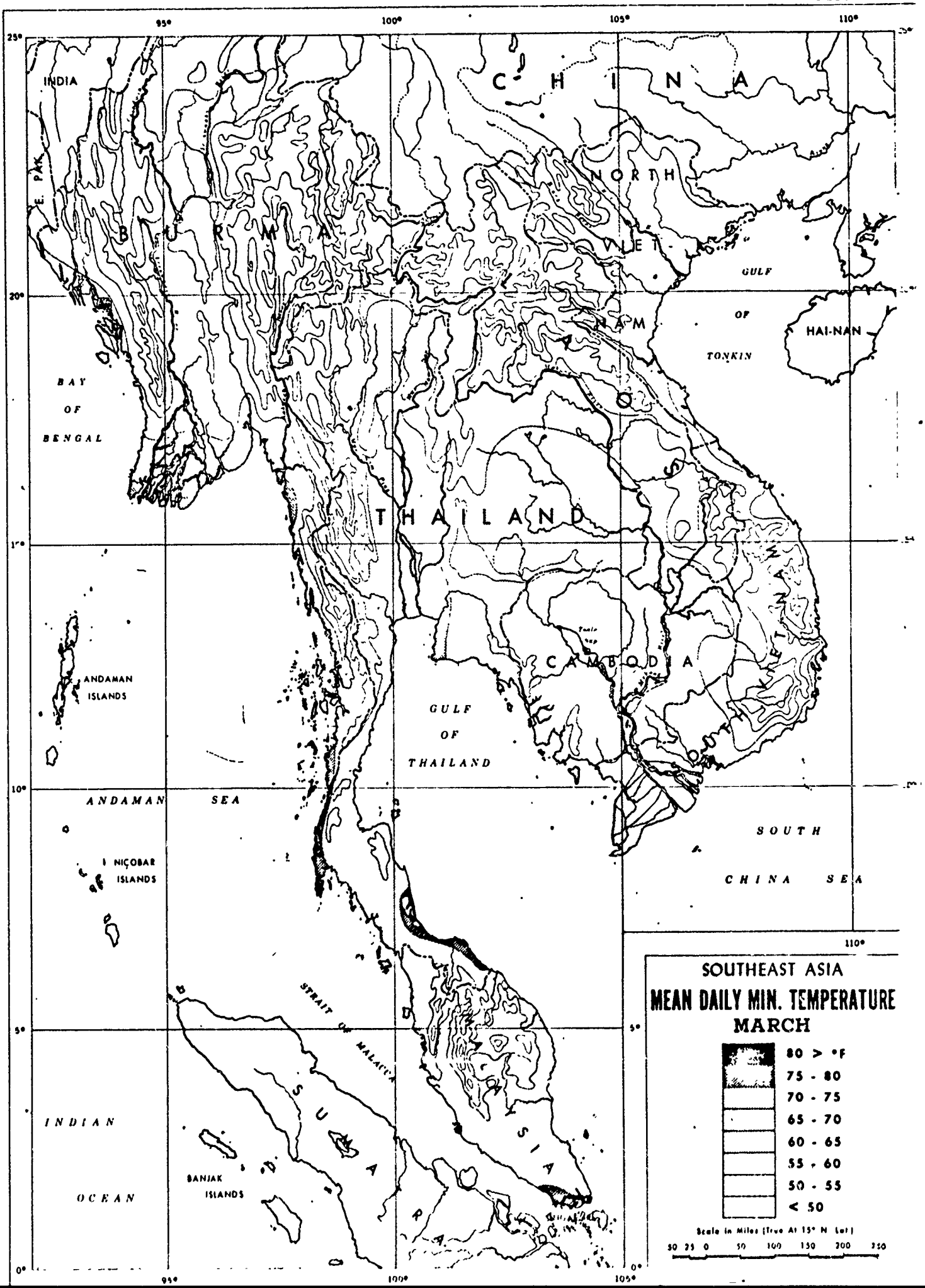

SOUTHEAST ASIA
MEAN DAILY MAX. TEMPERATURE
DECEMBER
100 > °F.
95 - 100
90 - 95
85 - 90
80 - 85
75 - 80
70 - 75
65 - 70
< 65
Scale in Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

MEAN DAILY MINIMUM TEMPERATURE

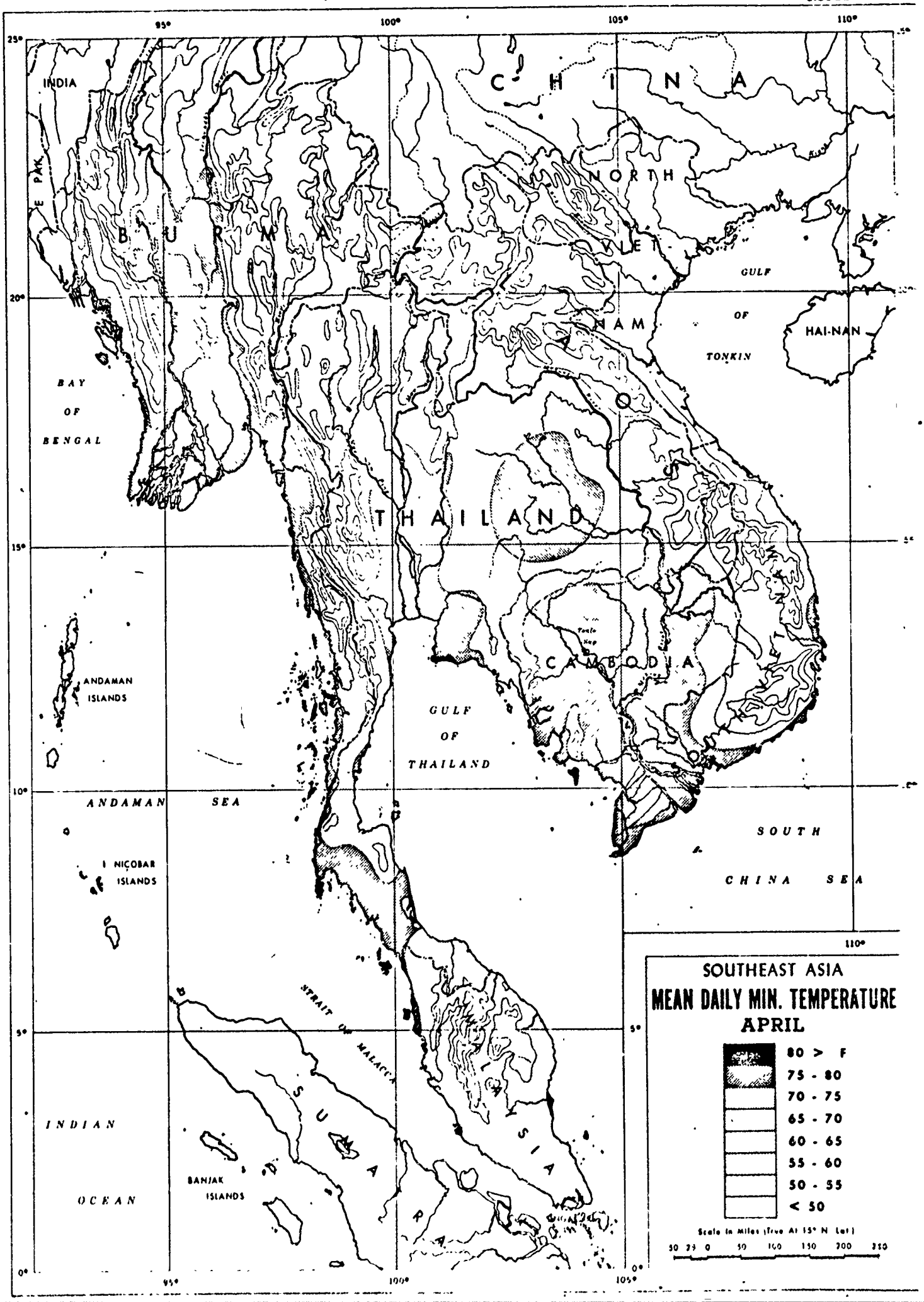

SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
JANUARY
80 > °F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
LAOS
THAILAND
CAMBODIA
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
ANDAMAN ISLANDS
NICOBAR ISLANDS
GULF OF THAILAND
ANDAMAN SEA
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
BANJAK ISLANDS
INDIAN OCEAN
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

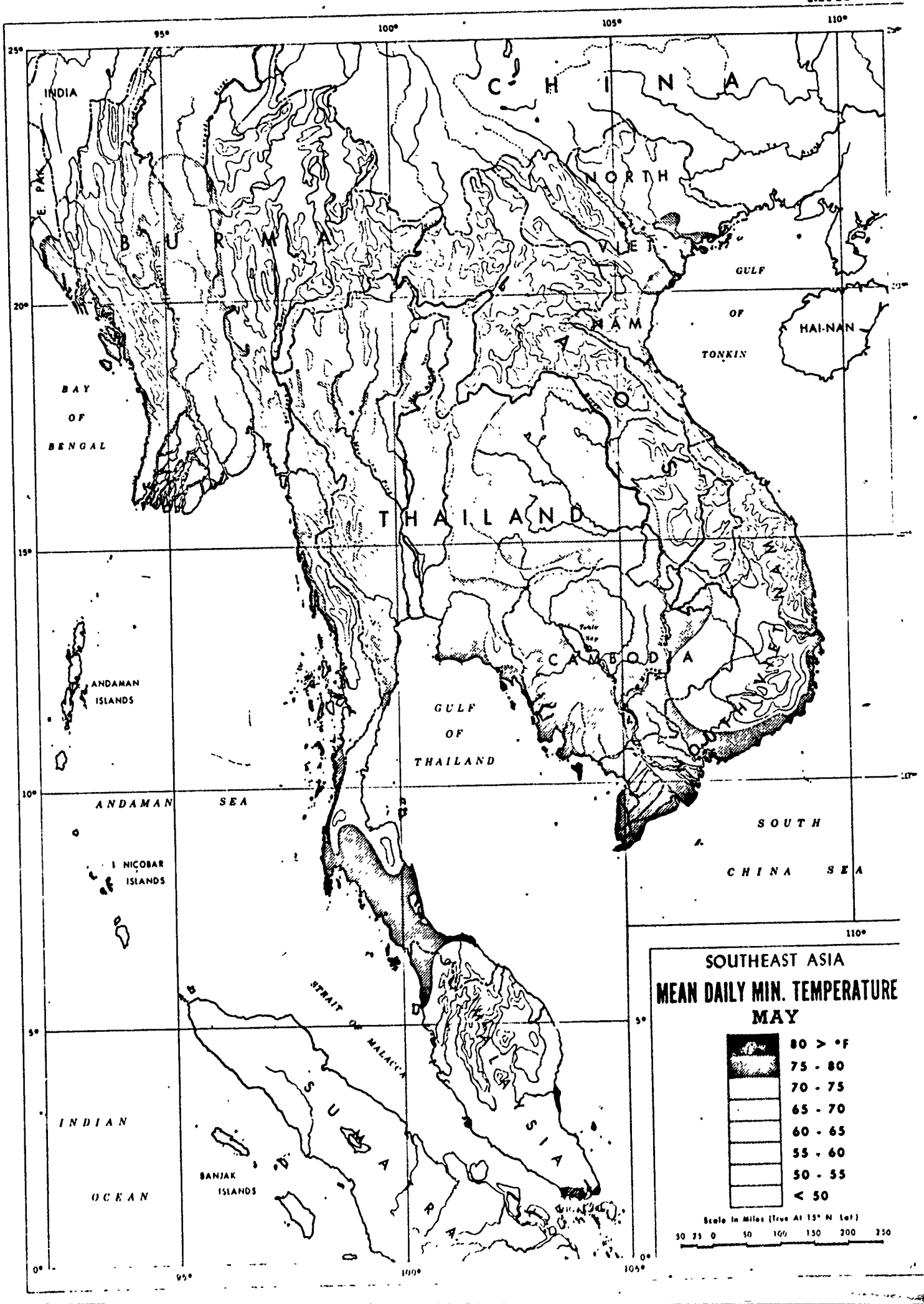
MAP 28


SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
FEBRUARY
80 > °F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
Scale In Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

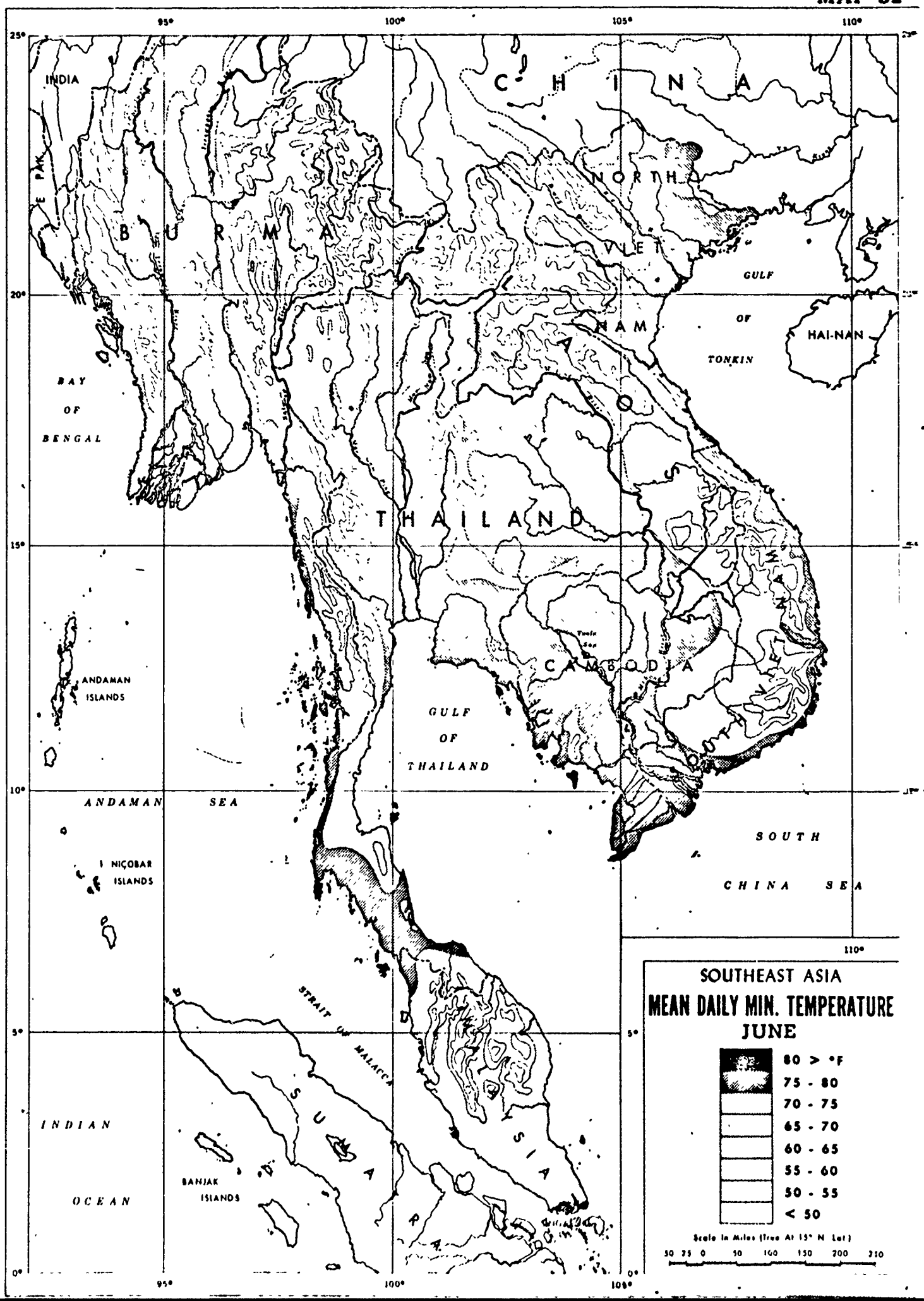

SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
MARCH
80 > °F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
SIAM
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

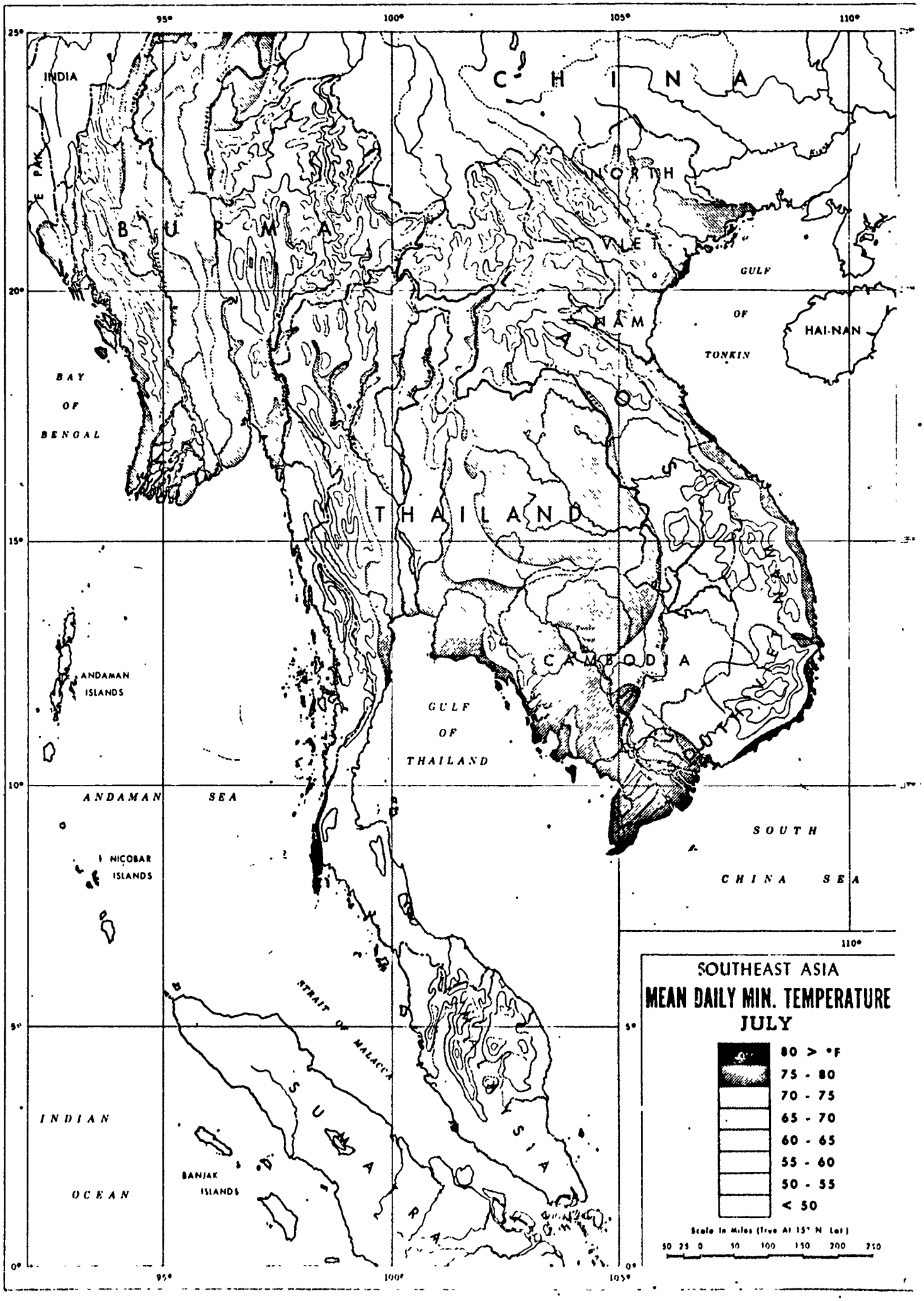
MAP 30

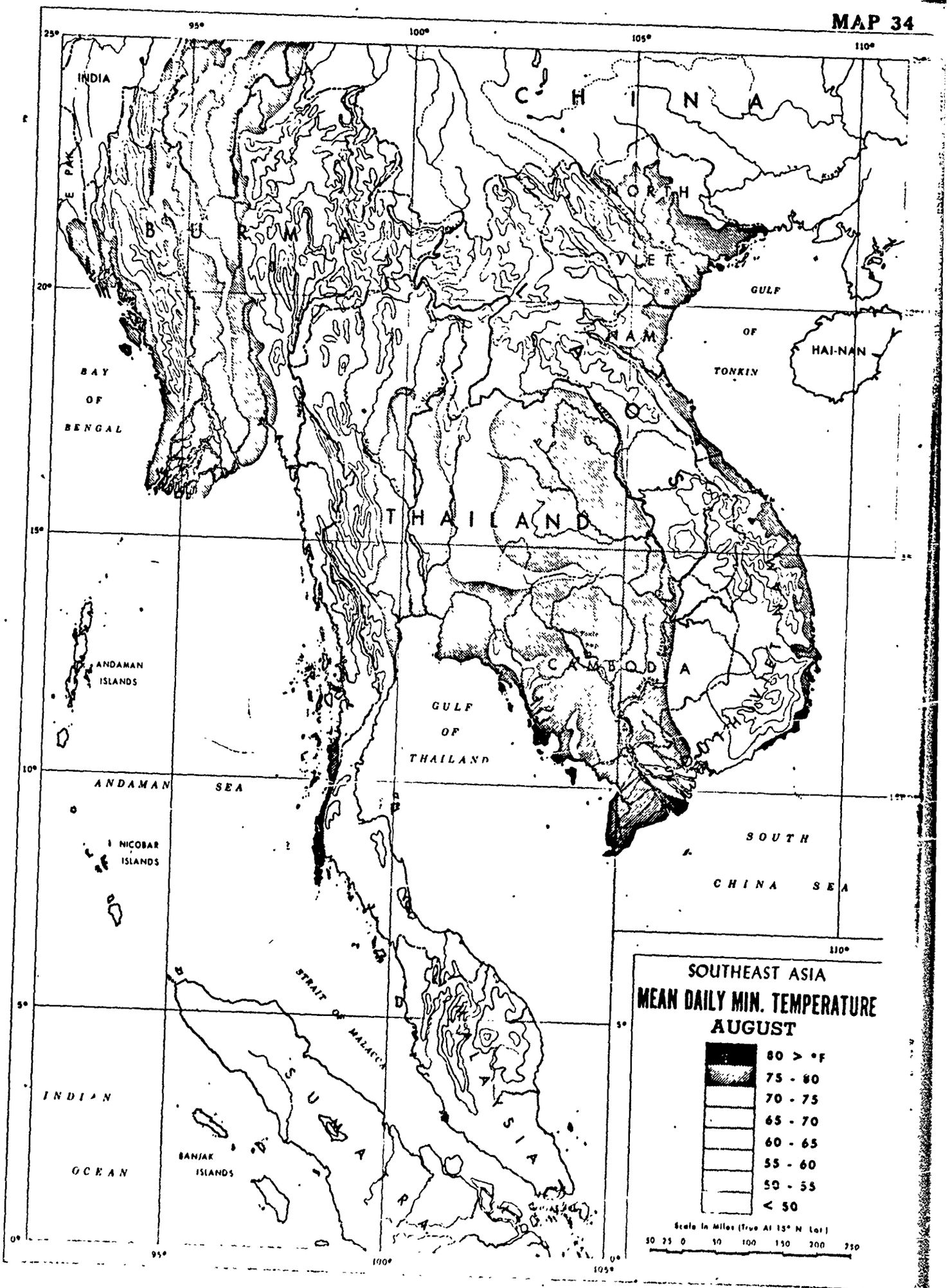

SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
APRIL
80 > F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
Scale in Miles (True At 15° N Lat)
CHINA
INDIA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
GULF OF THAILAND
ANDAMAN ISLANDS
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°


SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
MAY
80 > °F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
Scale In Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
CHINA
INDIA
E. PAK
BURMA
NORTH
VIET
NAM
LAOS
THAILAND
CAMBODIA
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN
OCEAN
BANJAK
ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

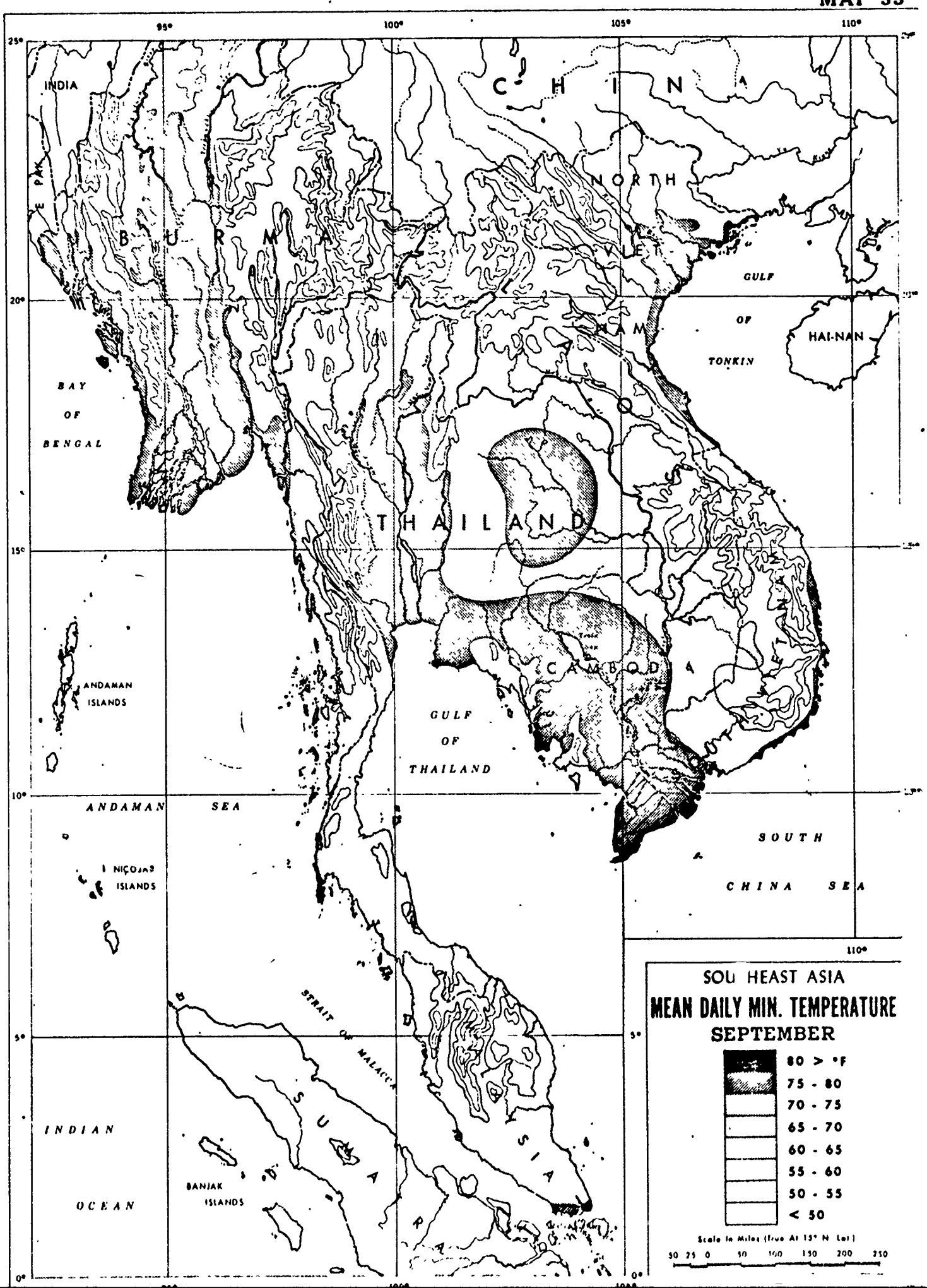
MAP 32


SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
JUNE
80 > °F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
Scale in Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
LAOS
CAMBODIA
SOUTH VIETNAM
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

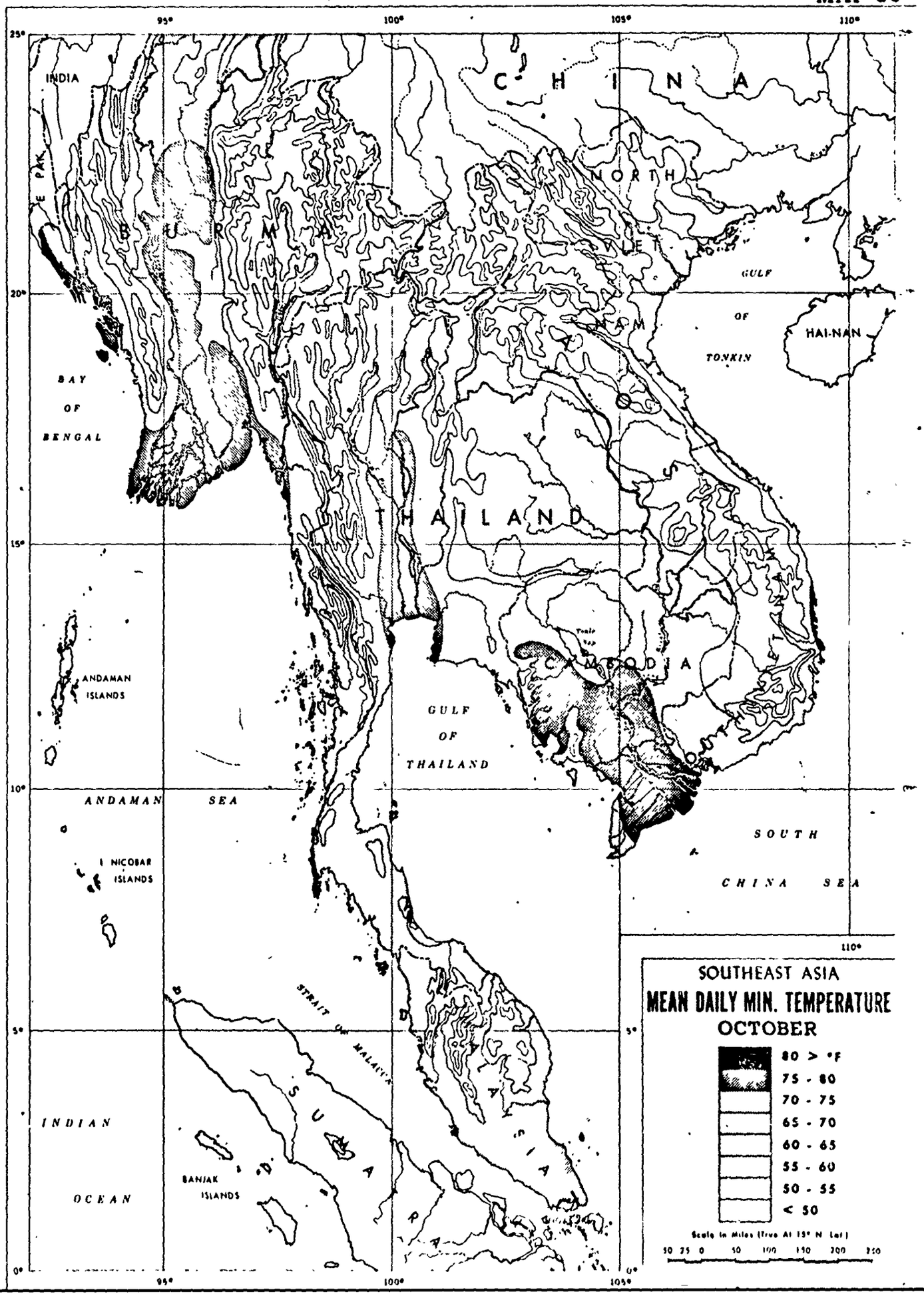

SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
JULY
80 > °F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
Scale In Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
NORTH VIETNAM
BURMA
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANJAK ISLANDS

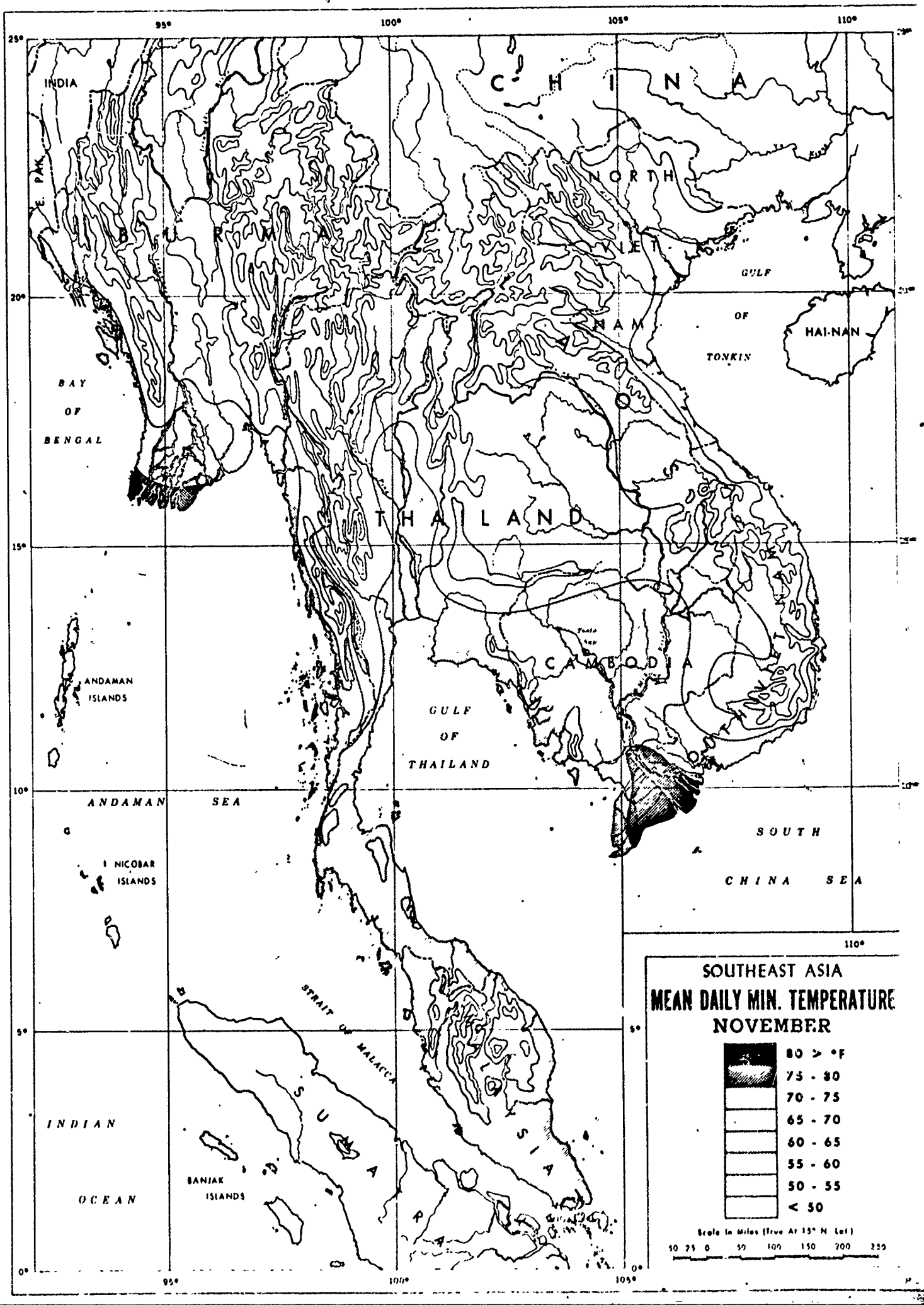

INDIA
CHINA
NORTH
VIET
NAM
BURMA
LAOS
THAILAND
CAMBODIA
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
ANDAMAN ISLANDS
NICOBAR ISLANDS
GULF OF THAILAND
ANDAMAN SEA
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
BANJAK ISLANDS
INDIAN OCEAN
SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
AUGUST
80 > °F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250

MAP 35

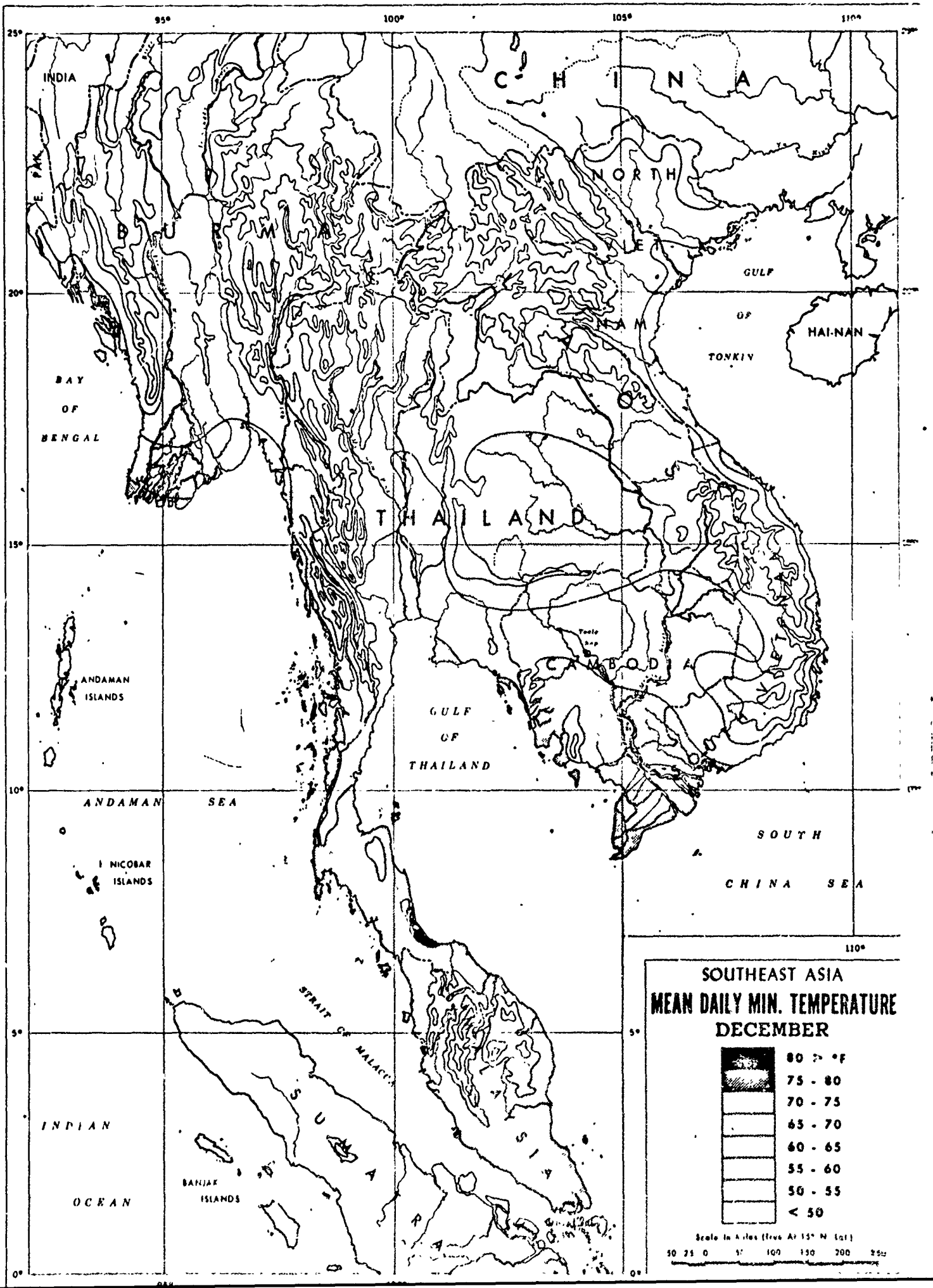

95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
NORTH
VIET
NAM
GULF
OF
TONKIN
HAI-NAN
BURMA
BAY
OF
BENGAL
THAILAND
LAOS
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
SOUTH
CHINA
SEA
NICOBAR
ISLANDS
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN
OCEAN
BANJAK
ISLANDS
SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
SEPTEMBER
80 > °F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250

MAP 36

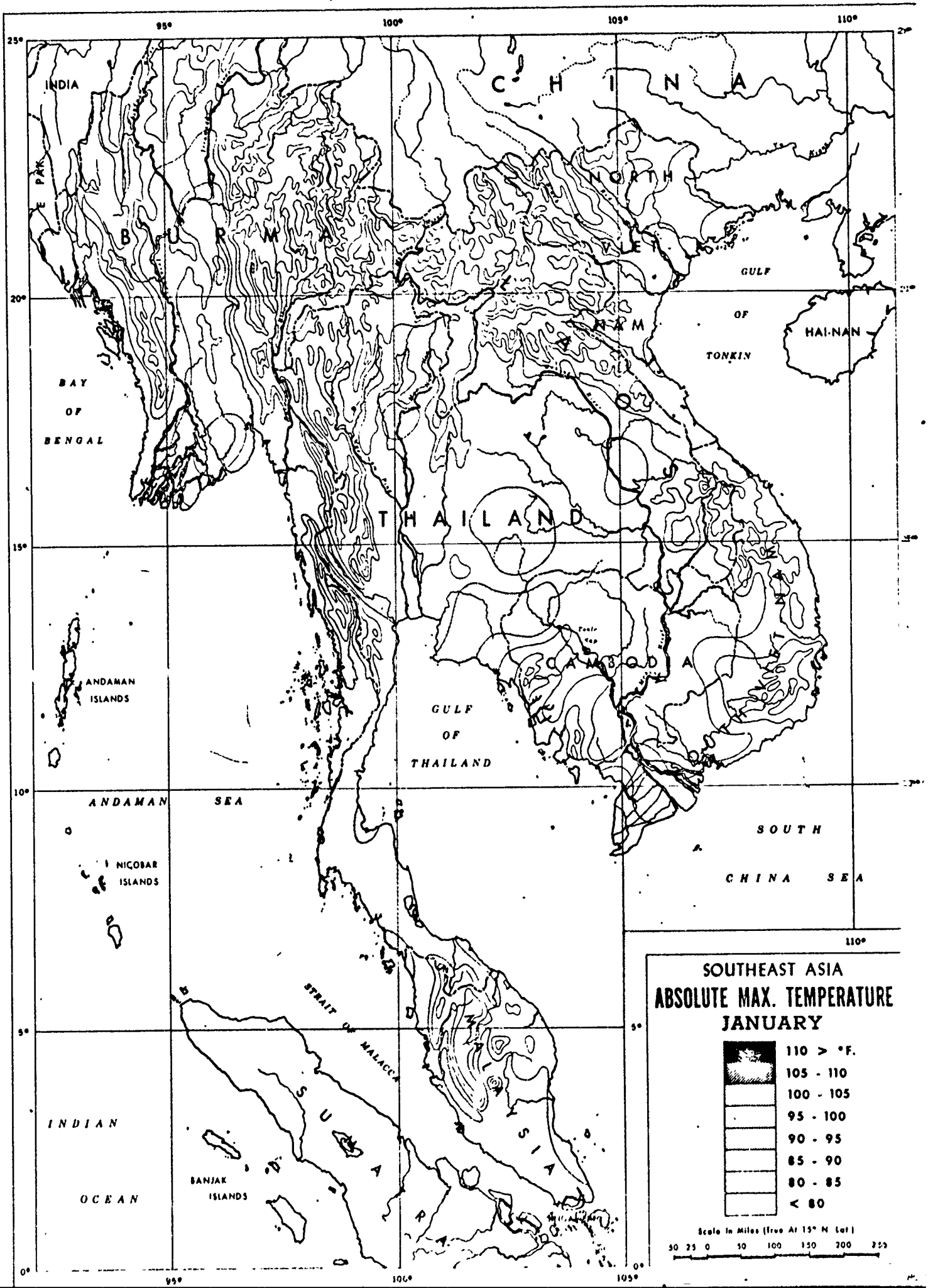

SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
OCTOBER
80 > °F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
NORTH
VIET
NAM
LAOS
BURMA
THAILAND
CAMBODIA
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN
OCEAN
BANJAK
ISLANDS


SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
NOVEMBER
80 > °F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
CHINA
INDIA
E. PAK.
BURMA
NORTH
VIET
NAM
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN
OCEAN
BANJAK
ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

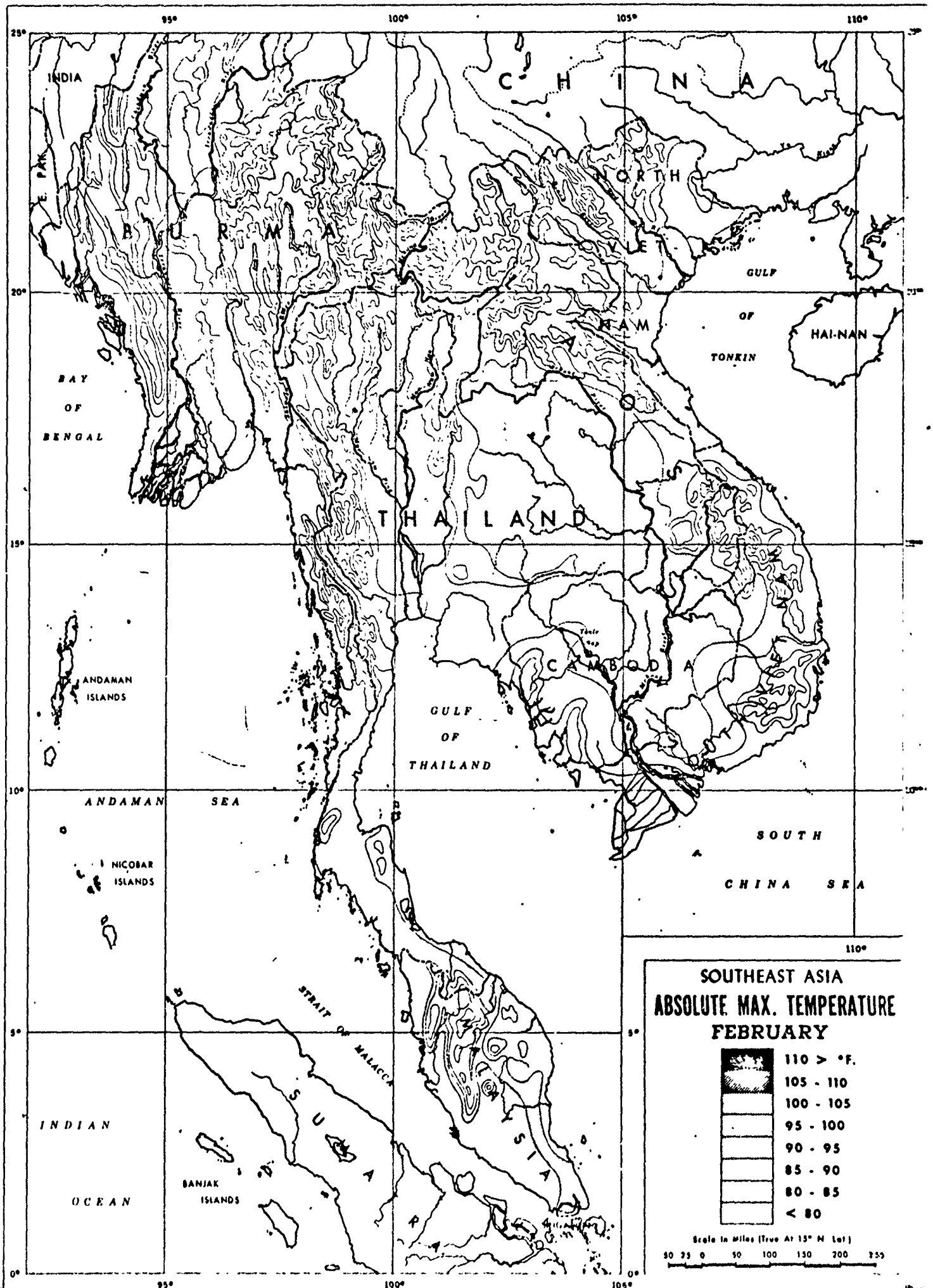
MAP 38

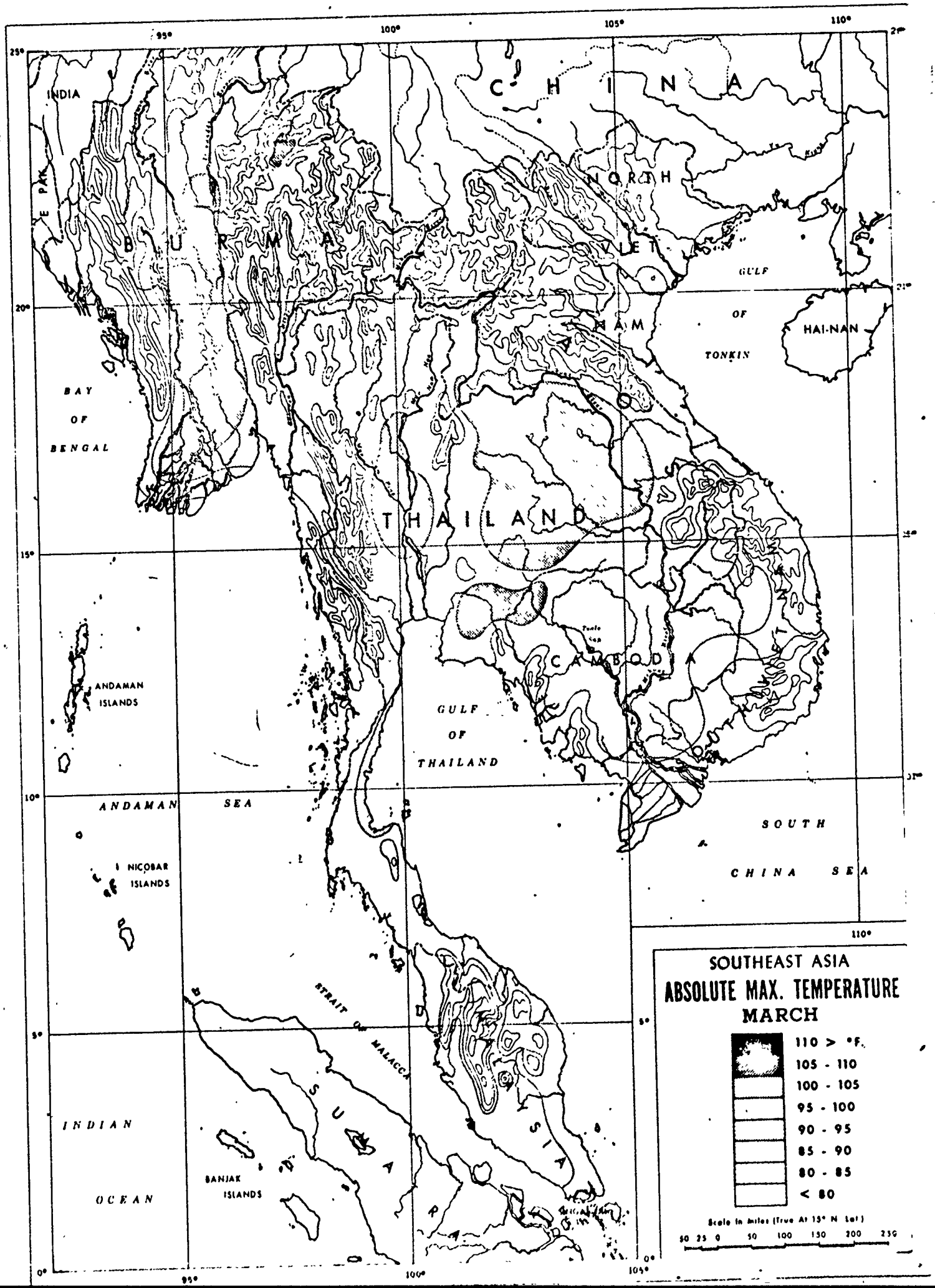

SOUTHEAST ASIA
MEAN DAILY MIN. TEMPERATURE
DECEMBER
80 & °F
75 - 80
70 - 75
65 - 70
60 - 65
55 - 60
50 - 55
< 50
INDIA
CHINA
BURMA
NORTH
VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

ABSOLUTE MAXIMUM TEMPERATURE

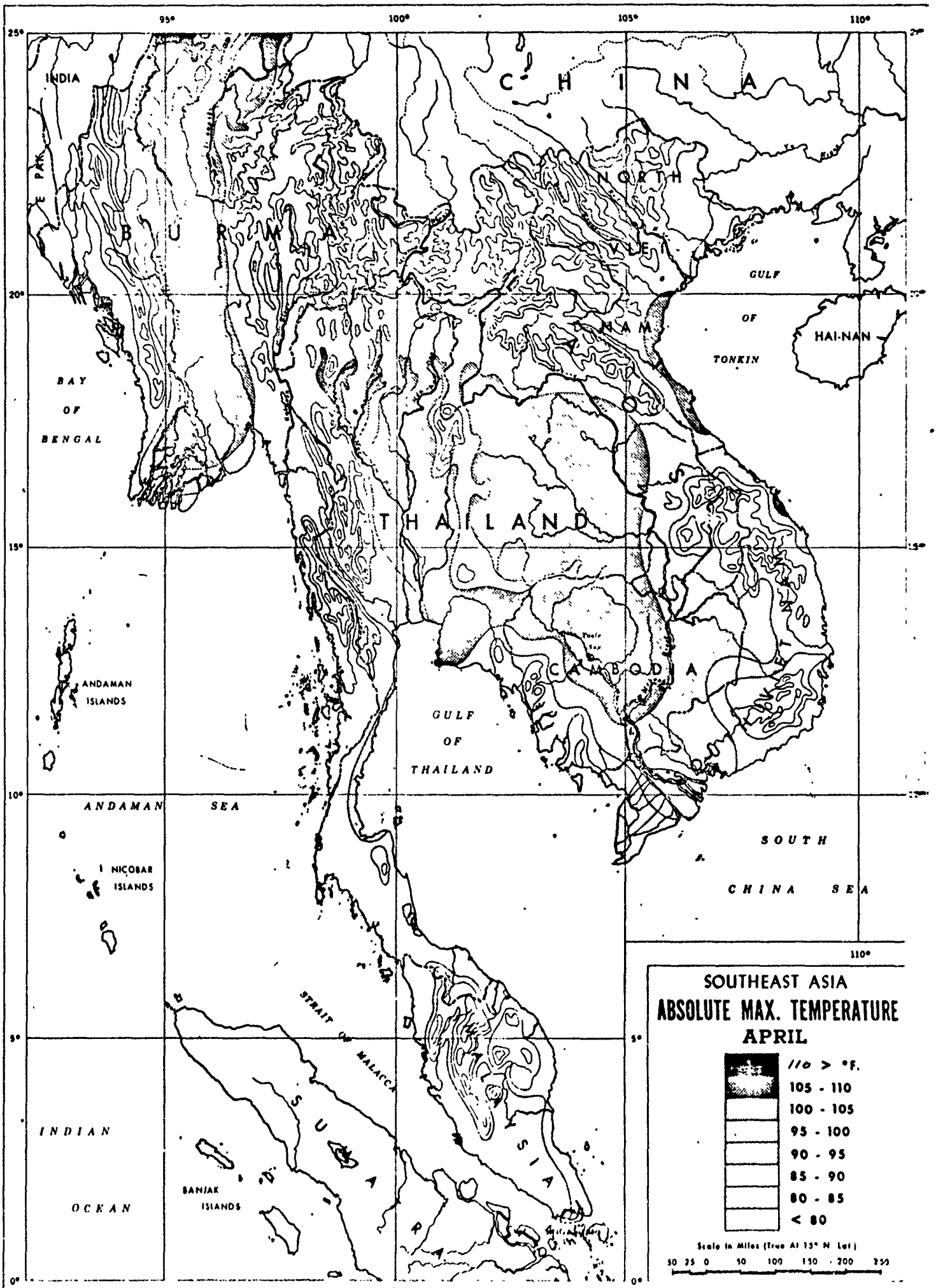

SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
JANUARY
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale In Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
LAOS
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANJAK ISLANDS

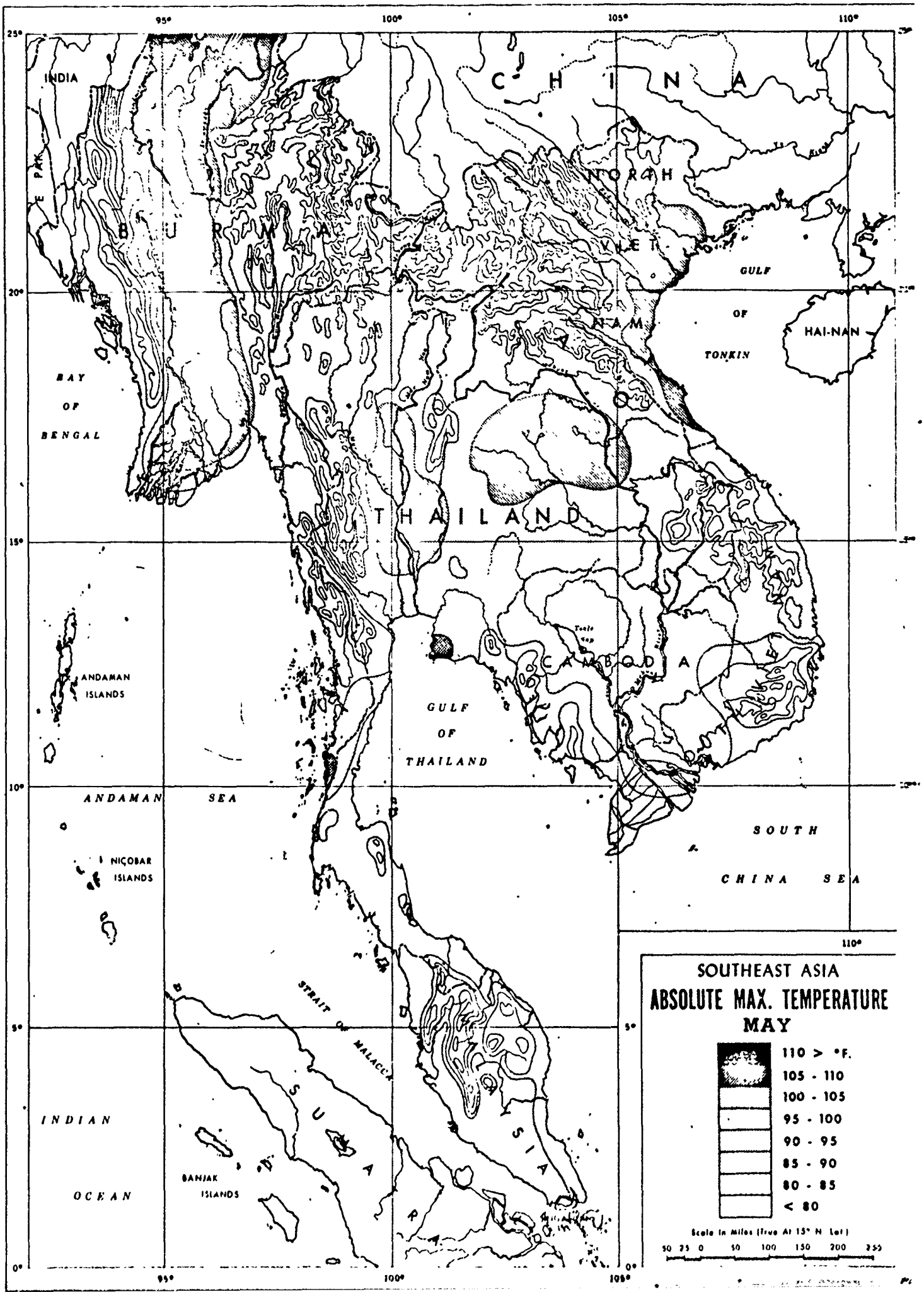
MAP 40

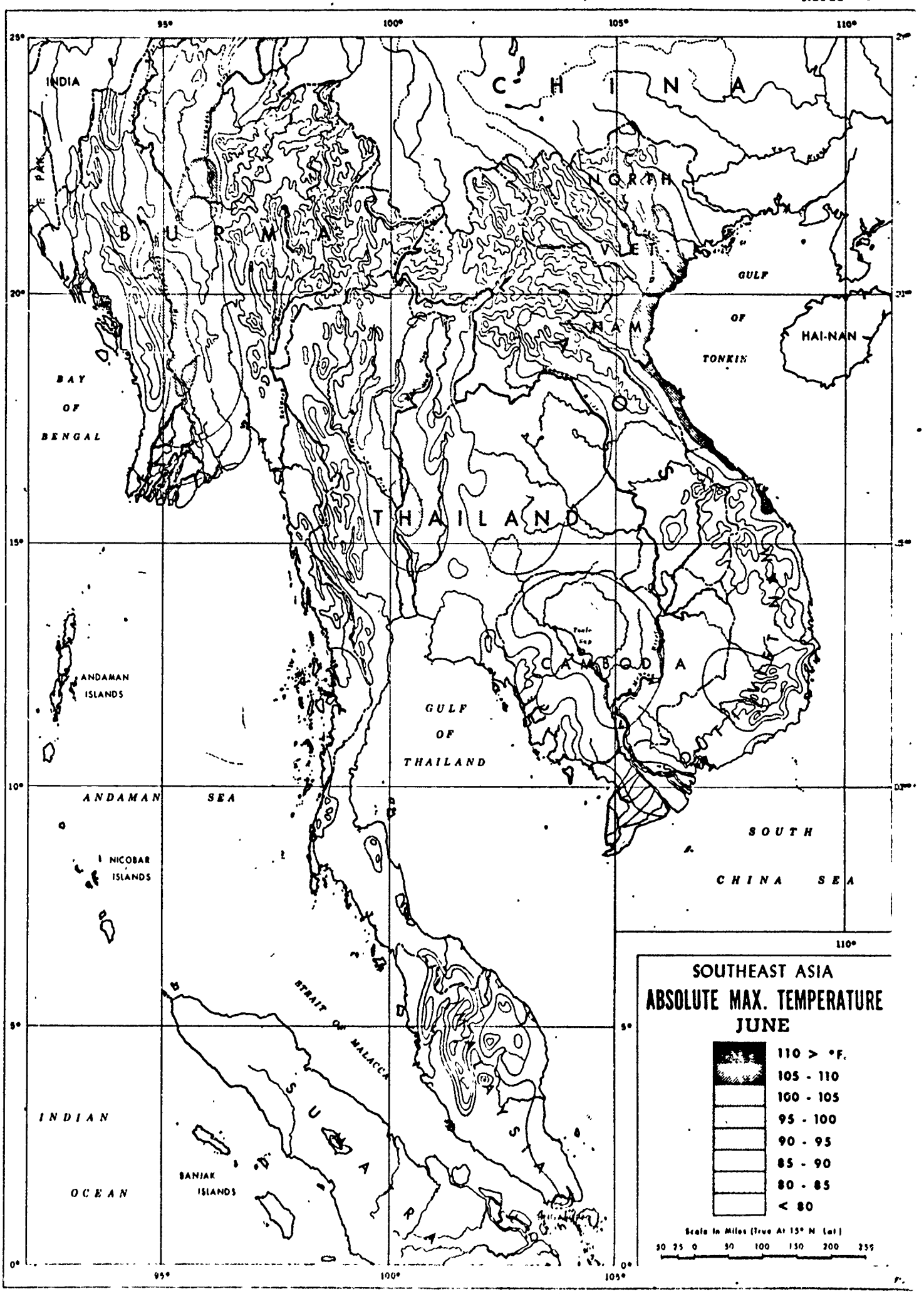

SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
FEBRUARY
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
CHINA
INDIA
BURMA
NORTH VIET NAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

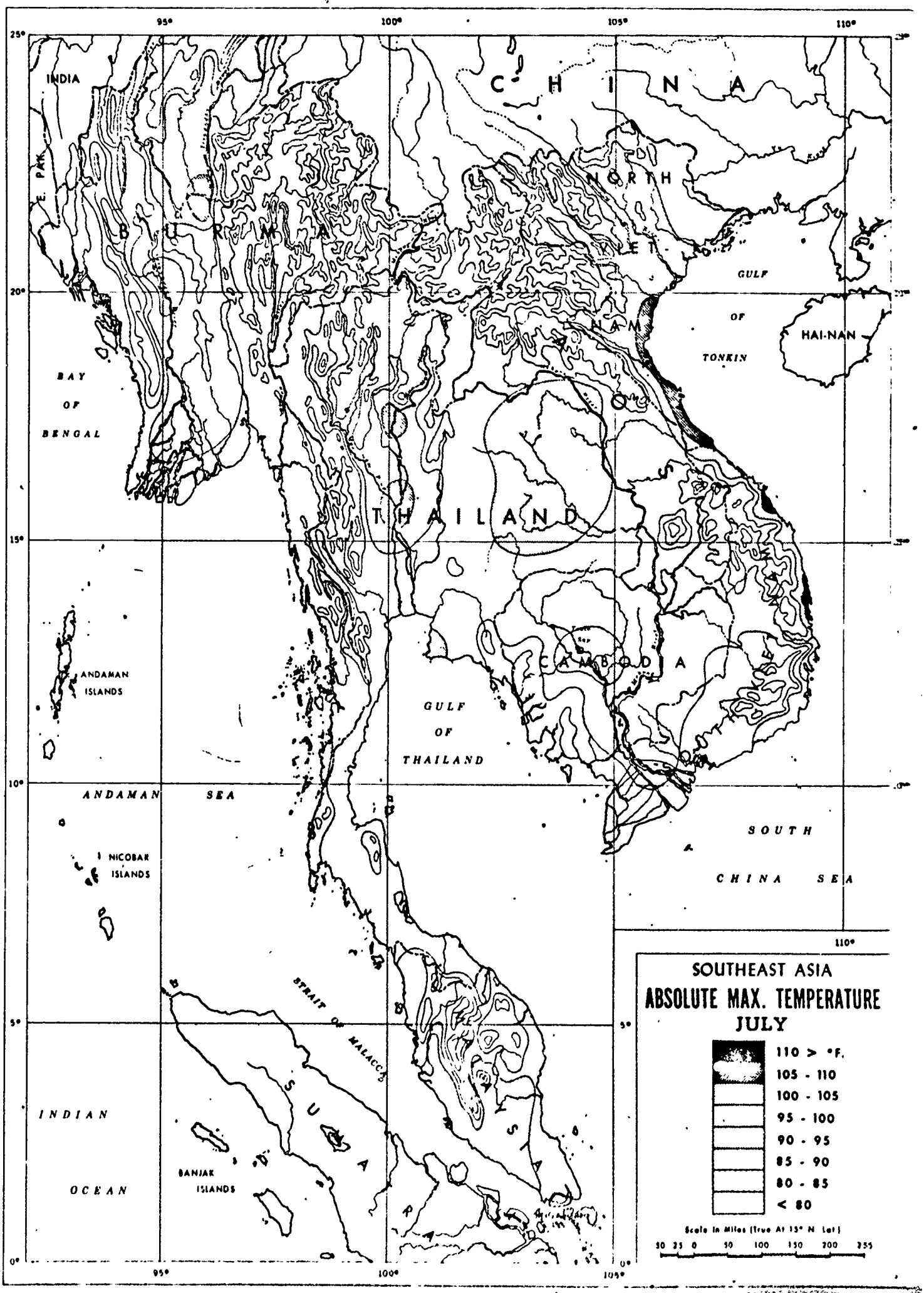

SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
MARCH
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH
VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

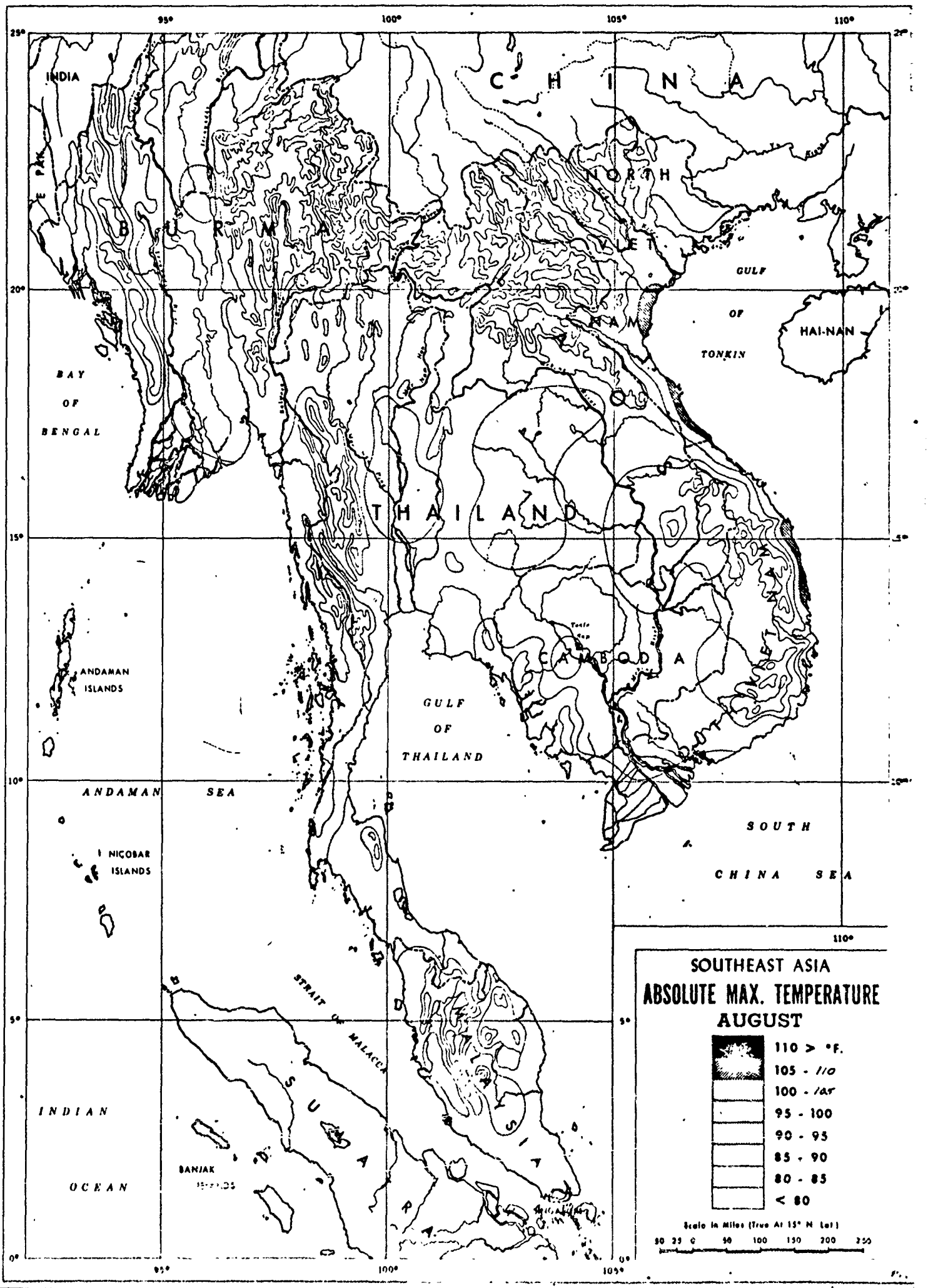
MAP 42

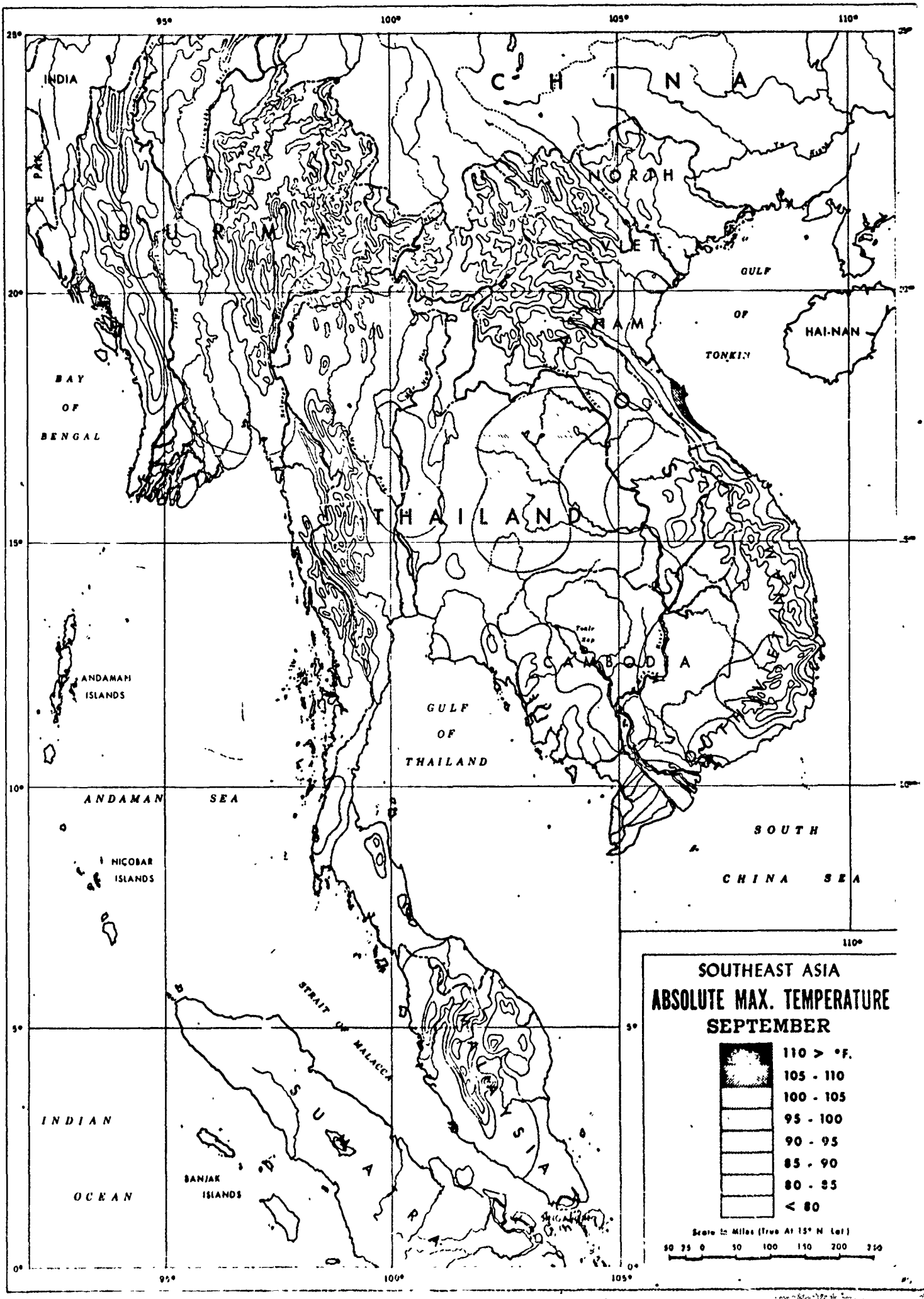

SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
APRIL
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale In Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
CHINA
INDIA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°


SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
MAY
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale In Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
LAOS
THAILAND
CAMBODIA
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
ANDAMAN ISLANDS
NICOBAR ISLANDS
GULF OF THAILAND
ANDAMAN SEA
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

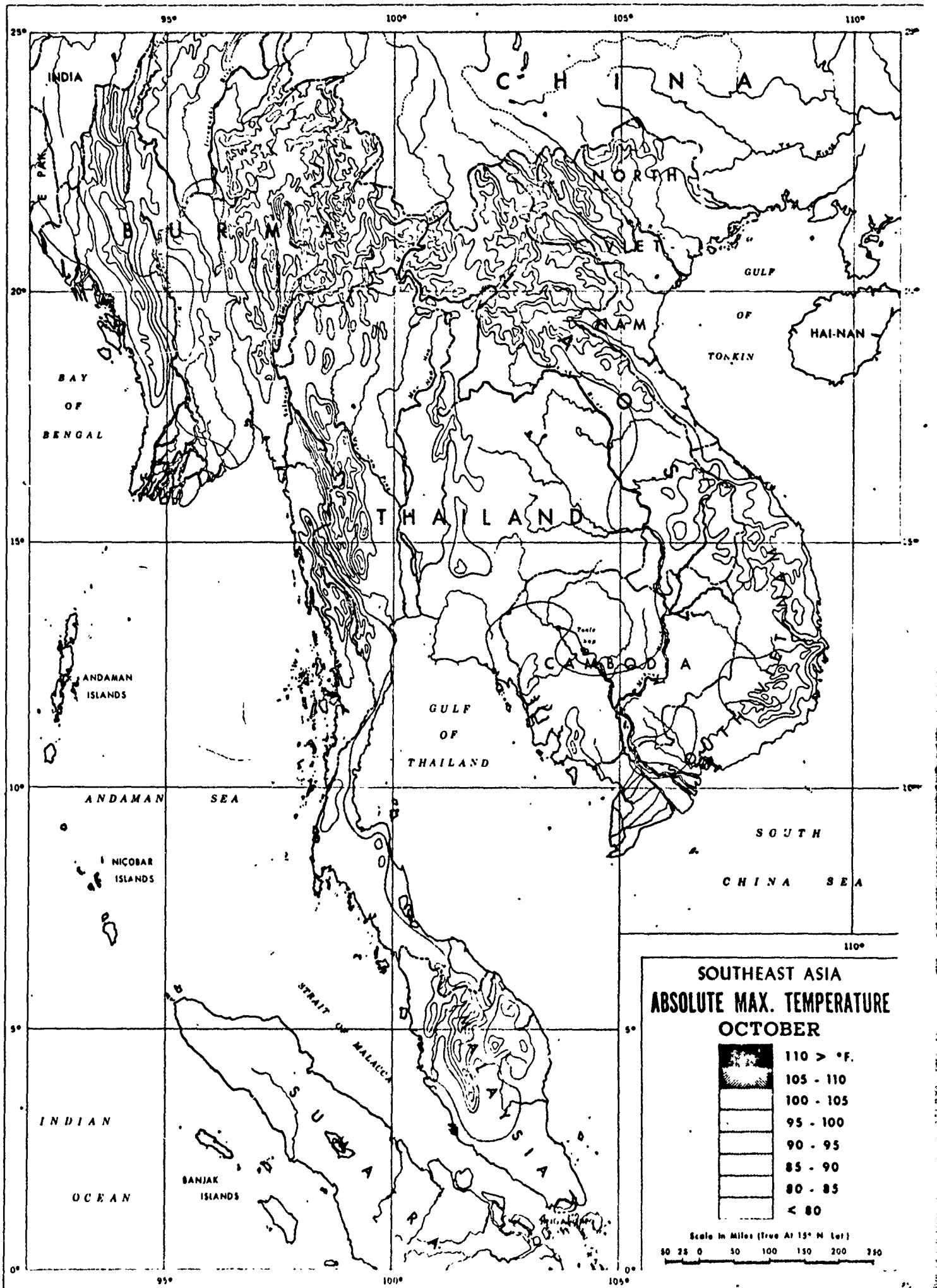

SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
JUNE
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale In Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
GULF OF THAILAND
ANDAMAN ISLANDS
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

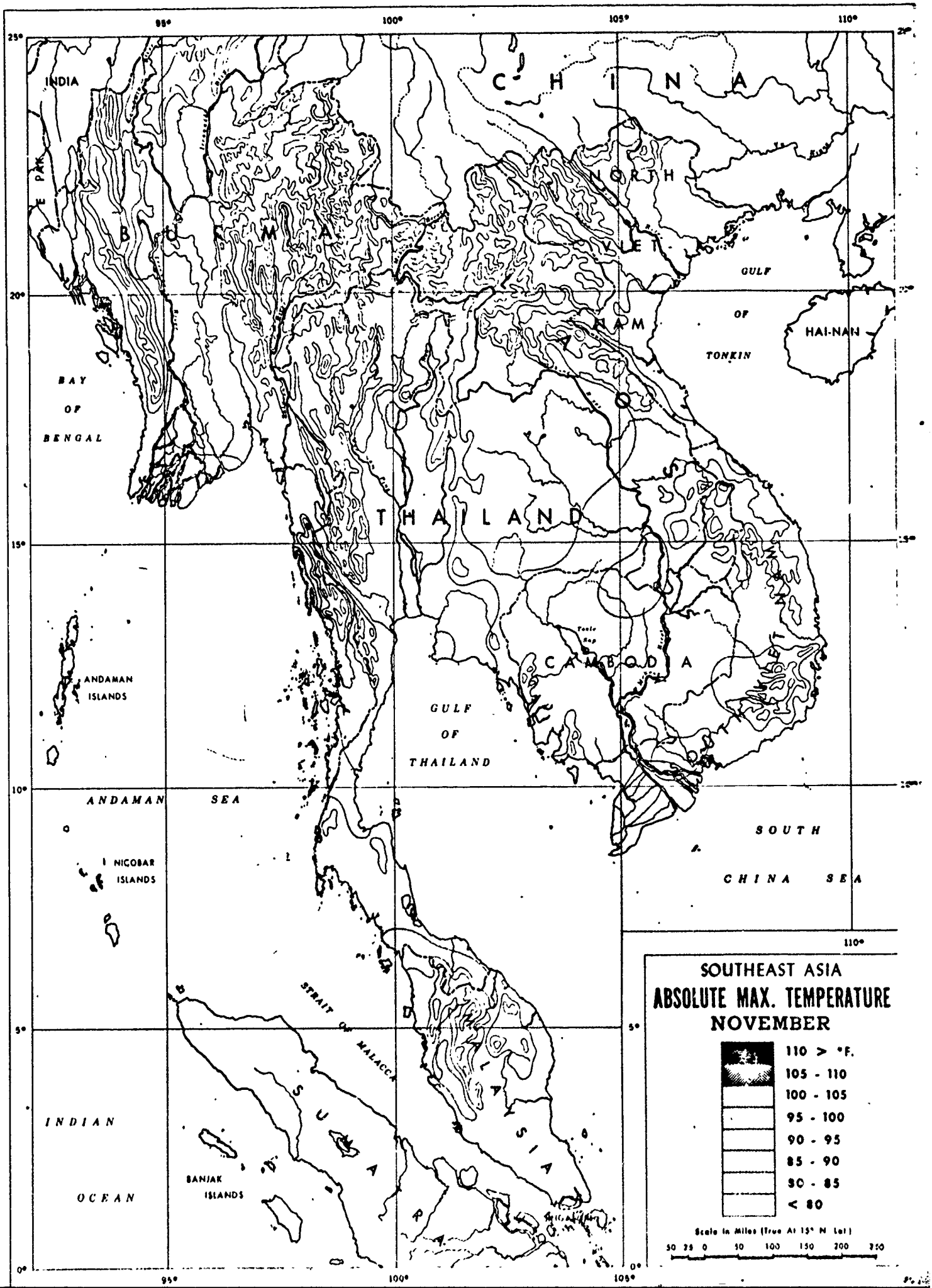

SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
JULY
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 255
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

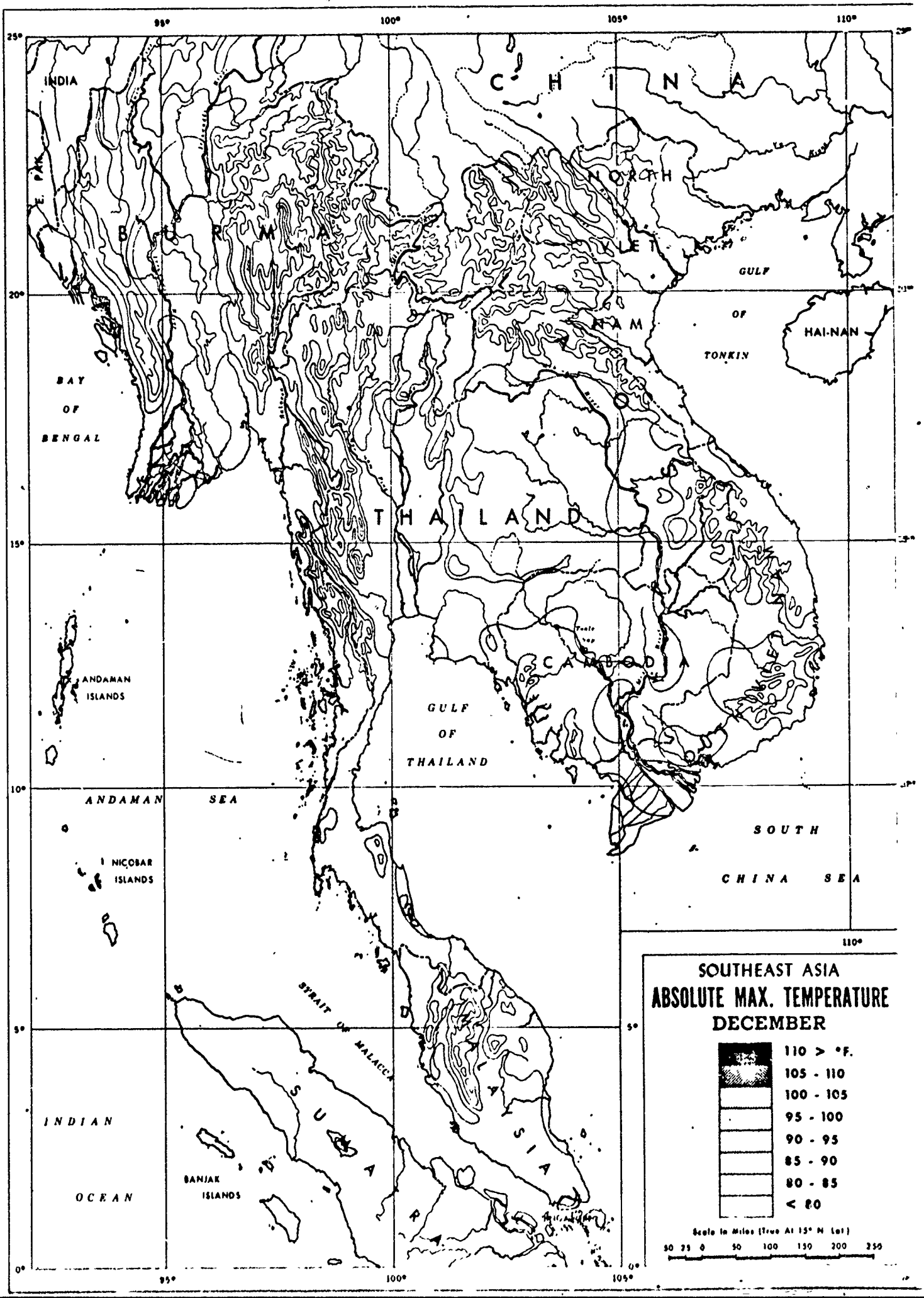

SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
AUGUST
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale In Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°


SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
SEPTEMBER
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH
VIET
NAM
LAOS
THAILAND
CAMBODIA
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
ANDAMAN
ISLANDS
NICOBAR
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
SOUTH
CHINA
SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN
OCEAN
BANJAK
ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

MAP 48

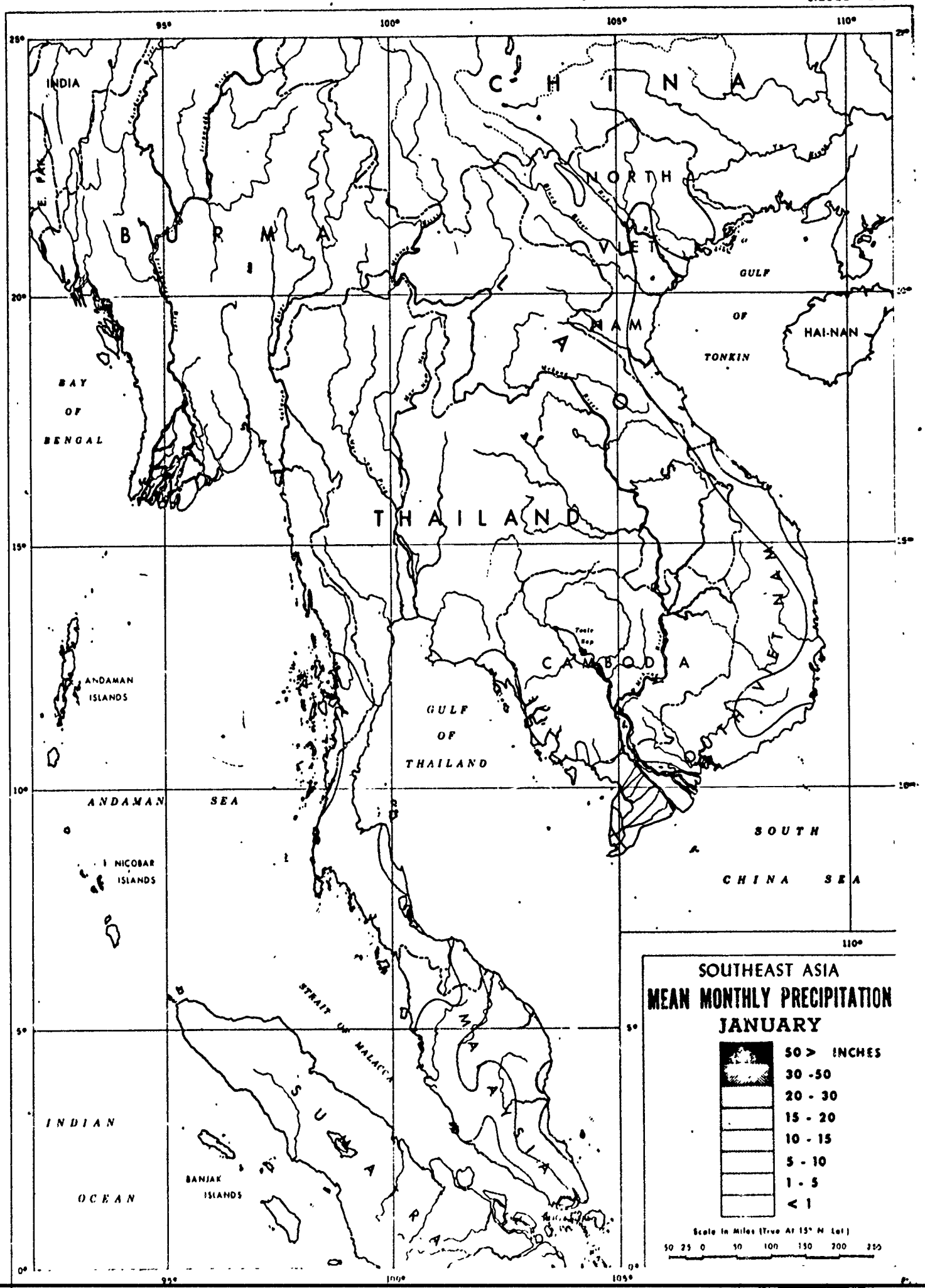

SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
OCTOBER
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale In Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH
VIET
NAM
LAOS
THAILAND
CAMBODIA
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN
OCEAN
BANJAK
ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

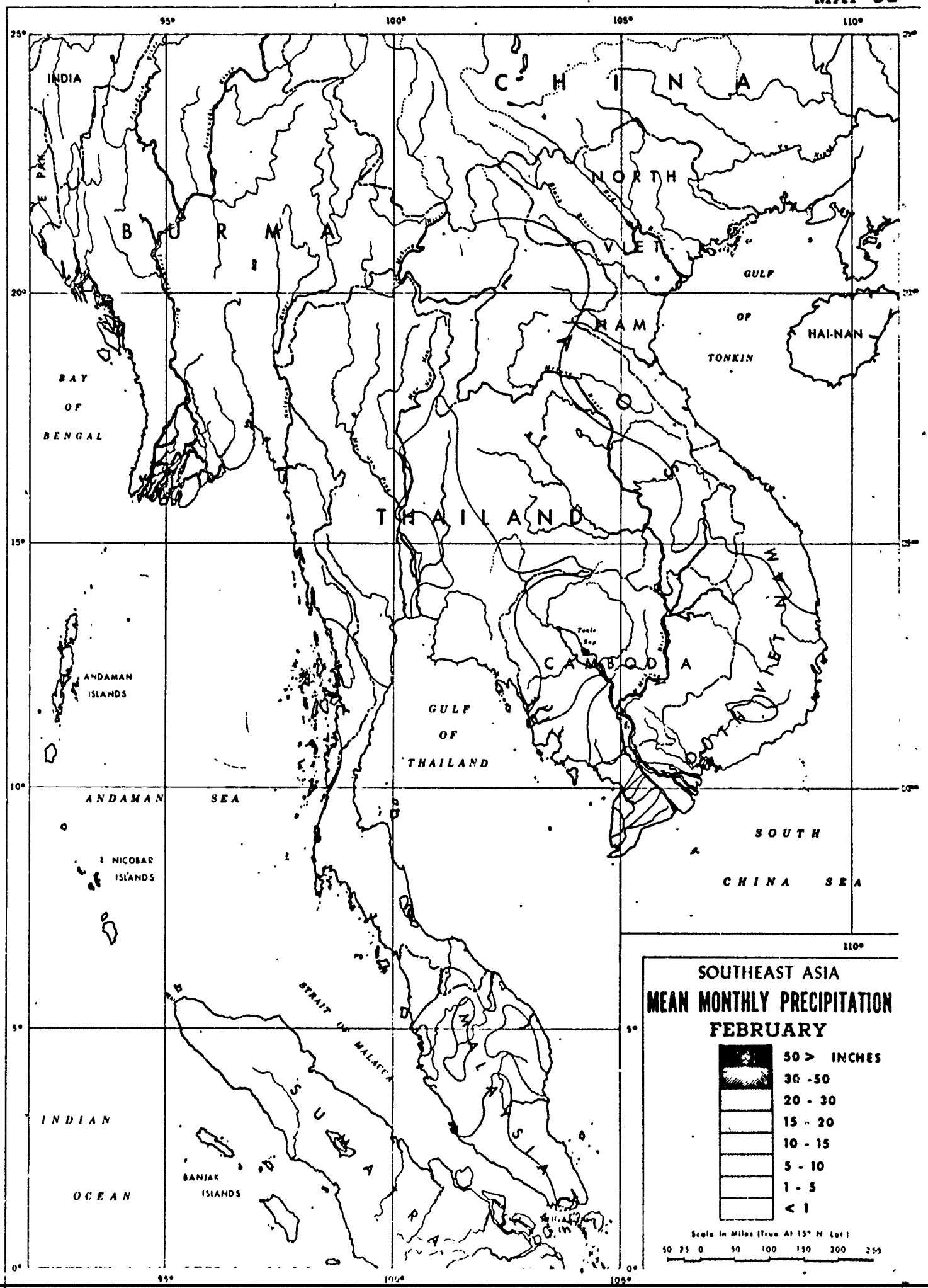

INDIA
CHINA
NORTH
VIET
NAM
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
SOUTH
CHINA
SEA
NICOBAR
ISLANDS
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN
OCEAN
BANJAK
ISLANDS
SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
NOVEMBER
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250

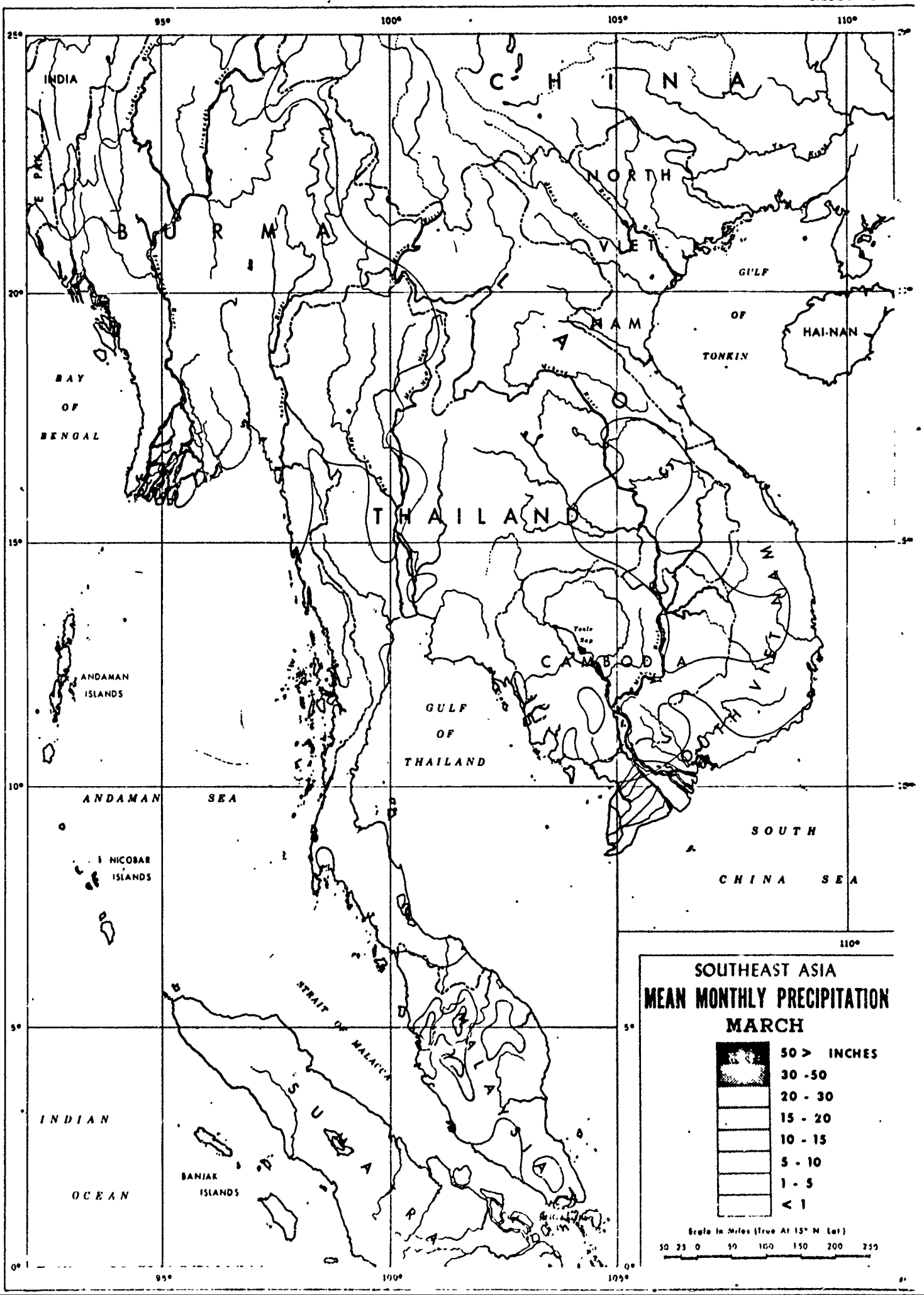

SOUTHEAST ASIA
ABSOLUTE MAX. TEMPERATURE
DECEMBER
110 > °F.
105 - 110
100 - 105
95 - 100
90 - 95
85 - 90
80 - 85
< 80
Scale in Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

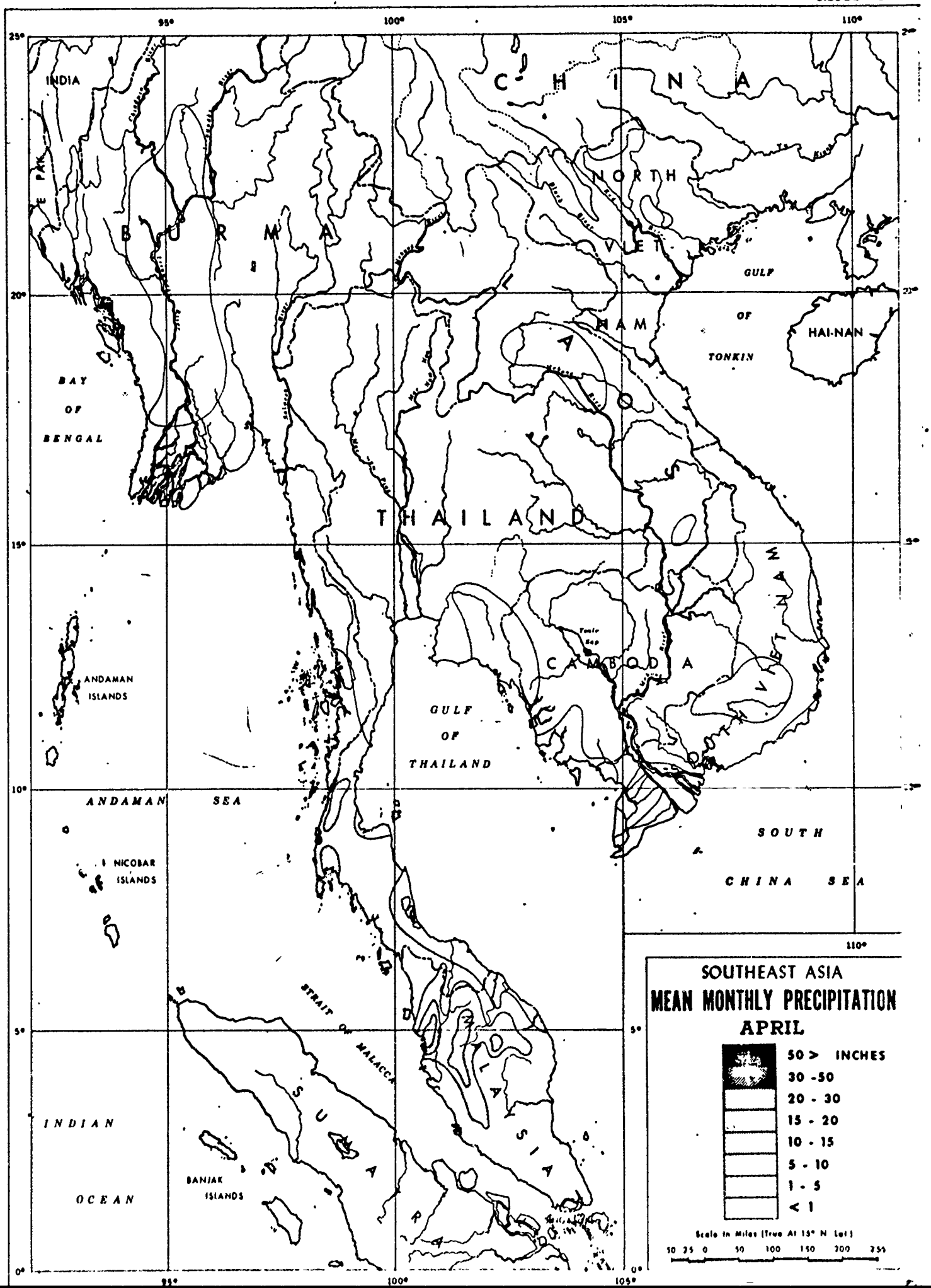
MEAN MONTHLY PRECIPITATION

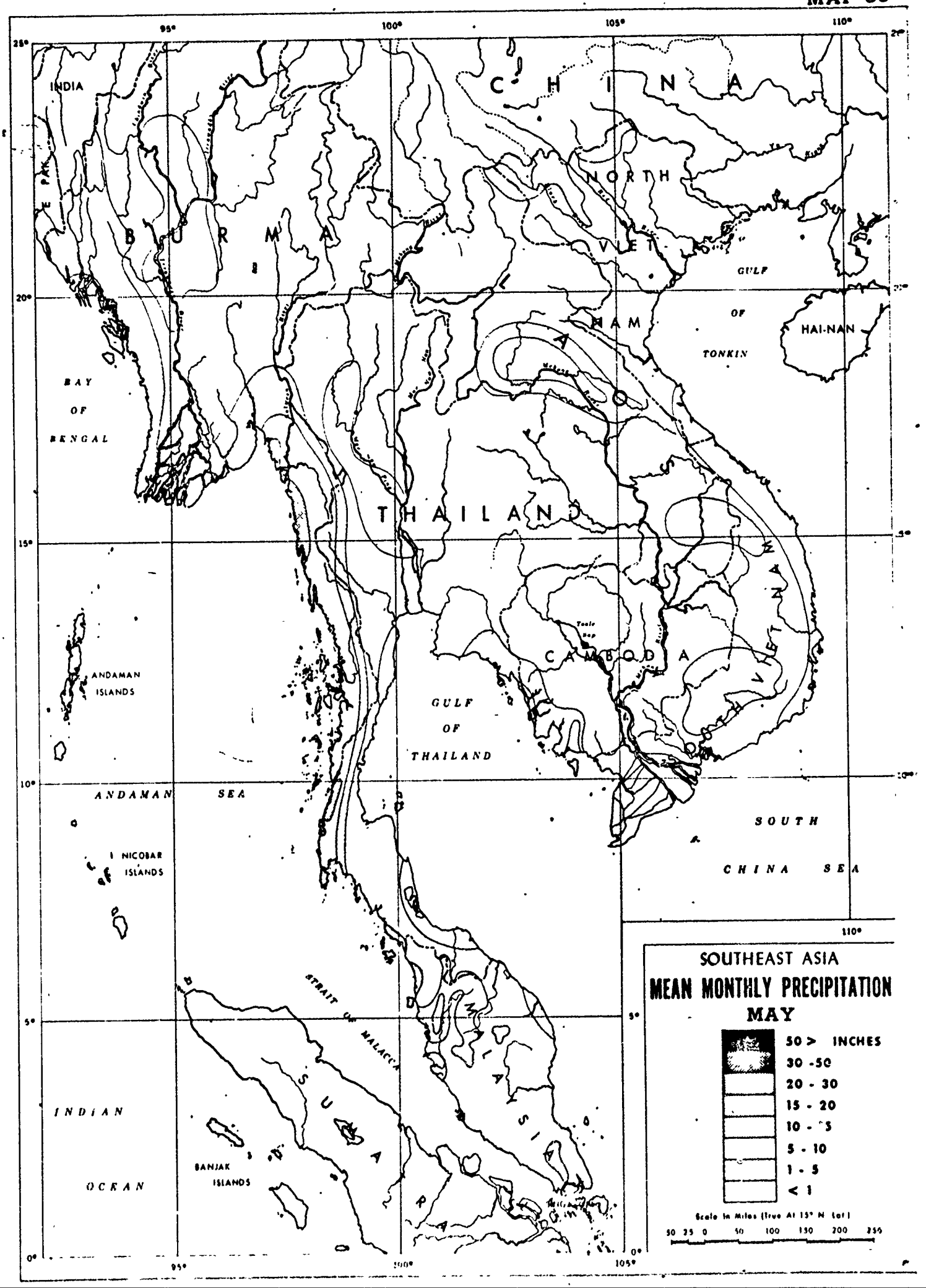
MAP 51

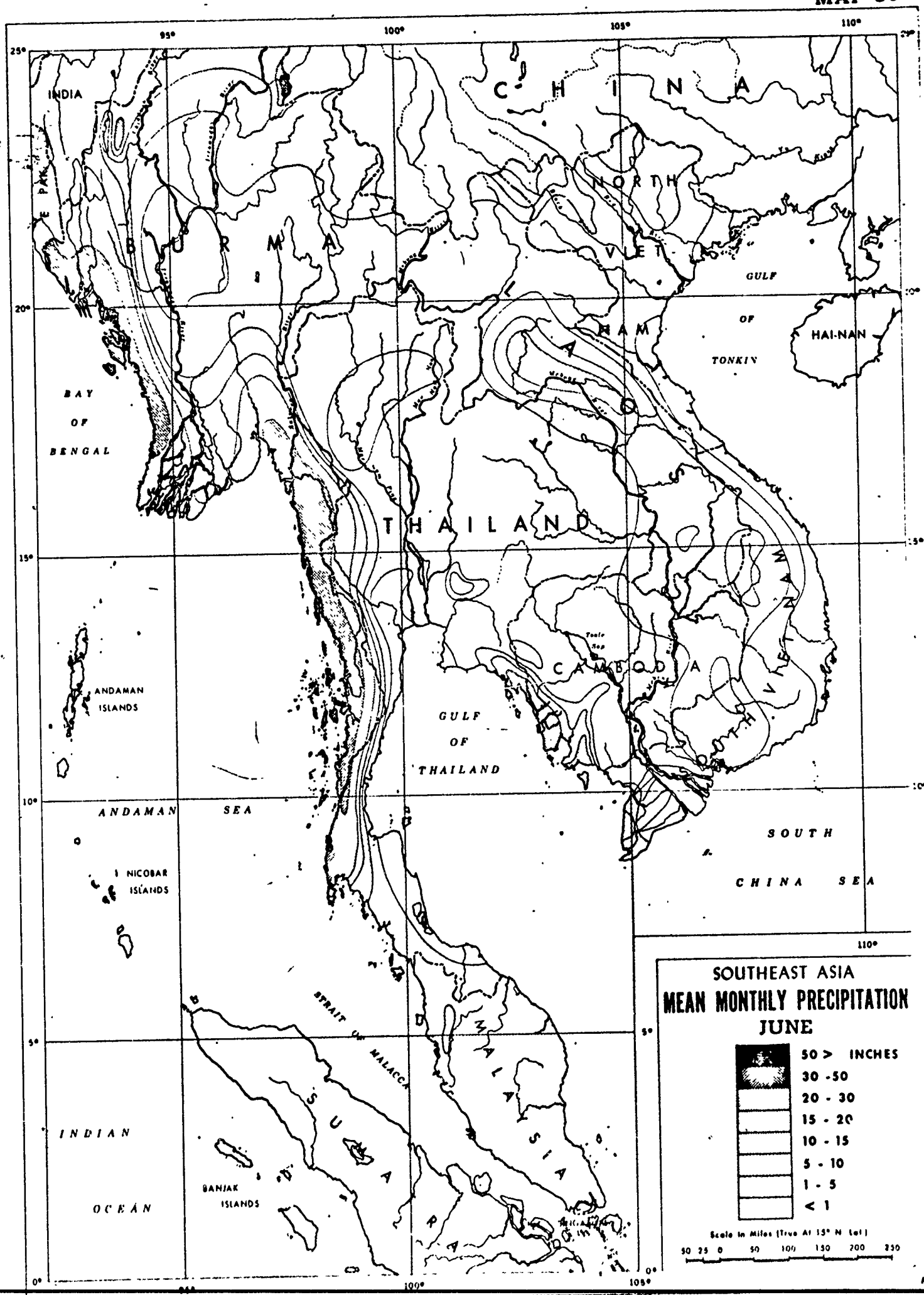

SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
JANUARY
50 > INCHES
30 - 50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
Scale In Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
LAOS
THAILAND
CAMBODIA
SOUTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
ANDAMAN ISLANDS
NICOBAR ISLANDS
GULF OF THAILAND
ANDAMAN SEA
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
BANJAK ISLANDS
INDIAN OCEAN
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

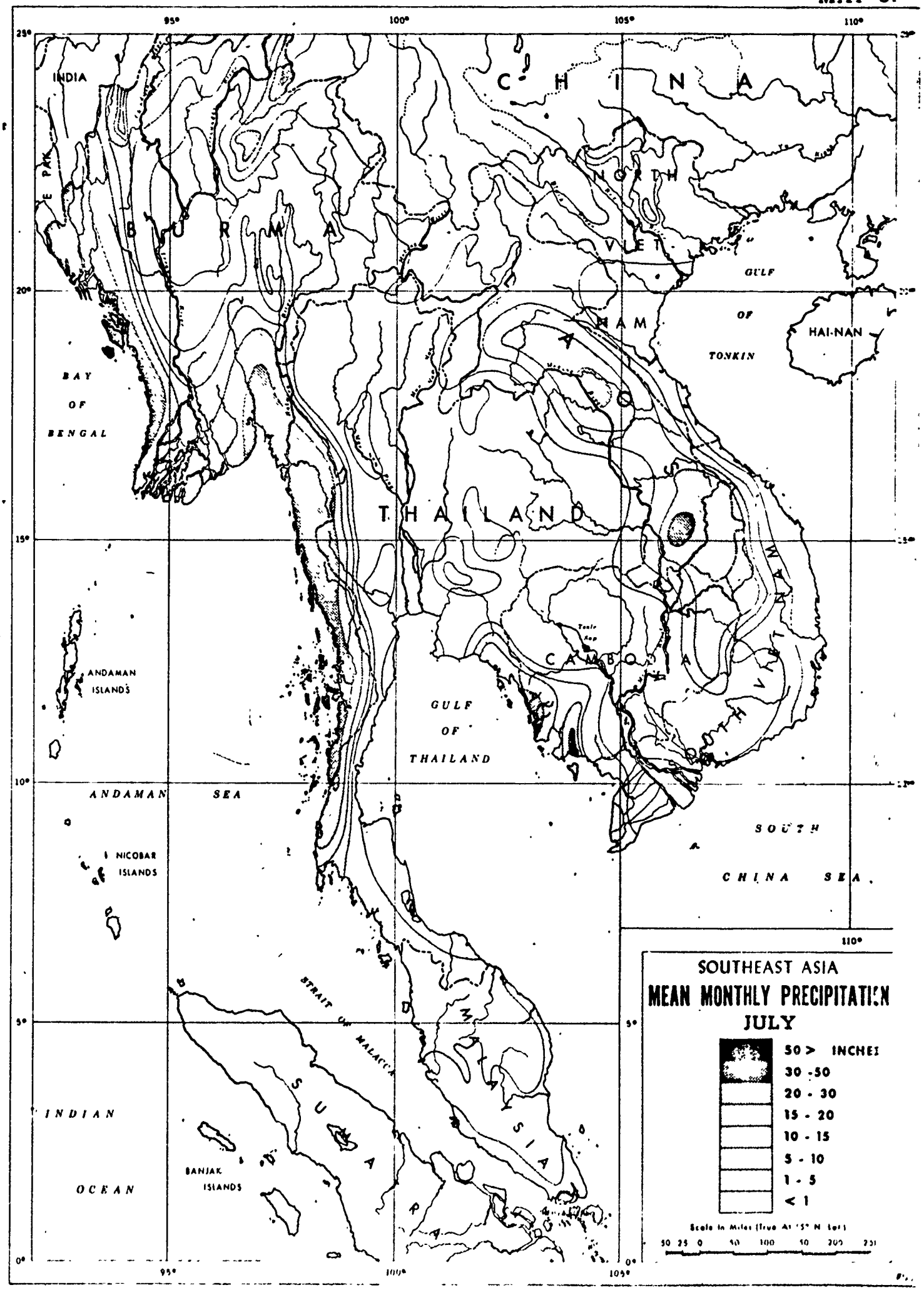

SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
FEBRUARY
50 > INCHES
30 - 50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
Scale In Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
SOUTH VIETNAM
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

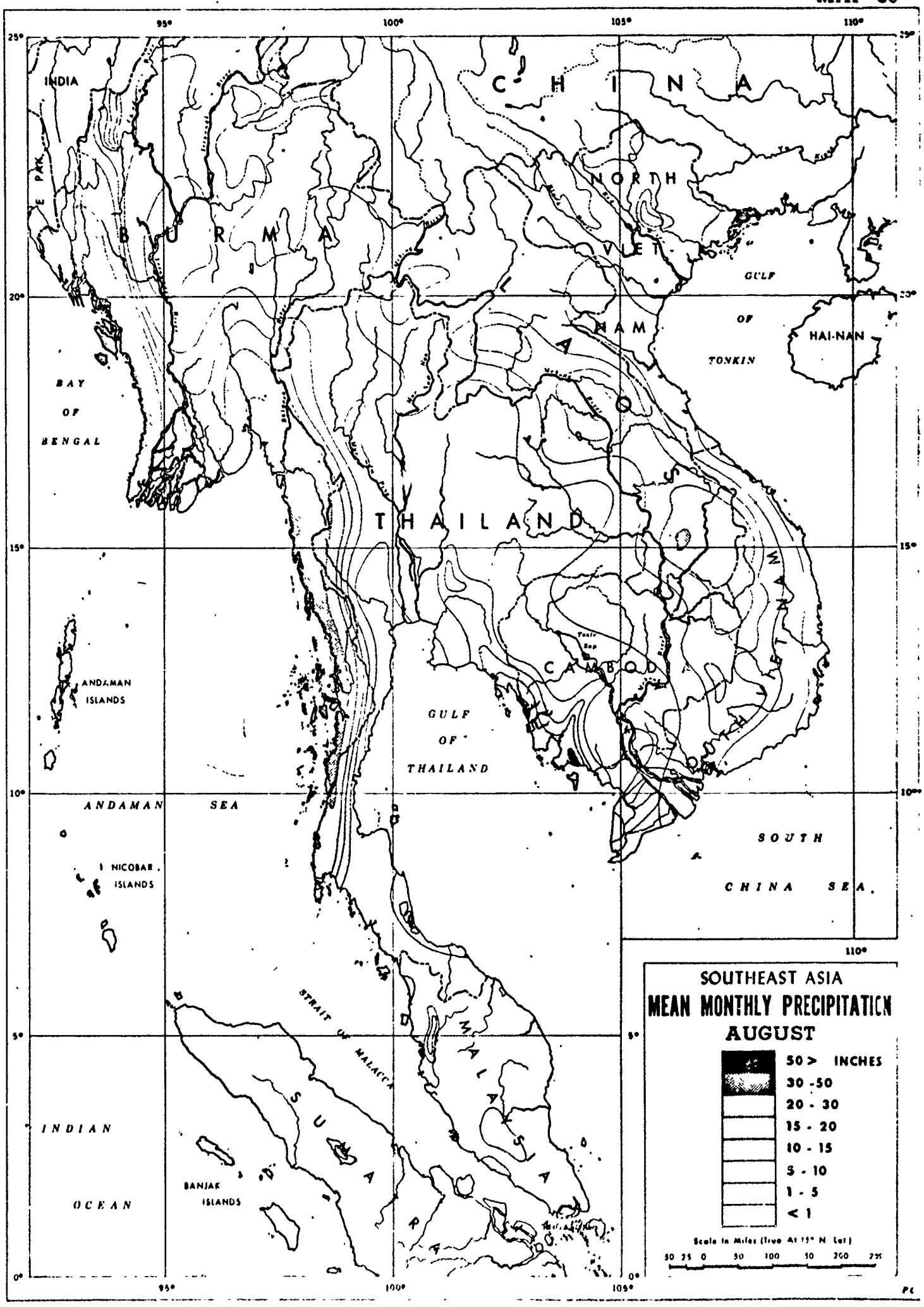

SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
MARCH
50 > INCHES
30 - 50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH
VIET
LAOS
THAILAND
CAMBODIA
SOUTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
ANDAMAN ISLANDS
NICOBAR ISLANDS
GULF OF THAILAND
ANDAMAN SEA
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

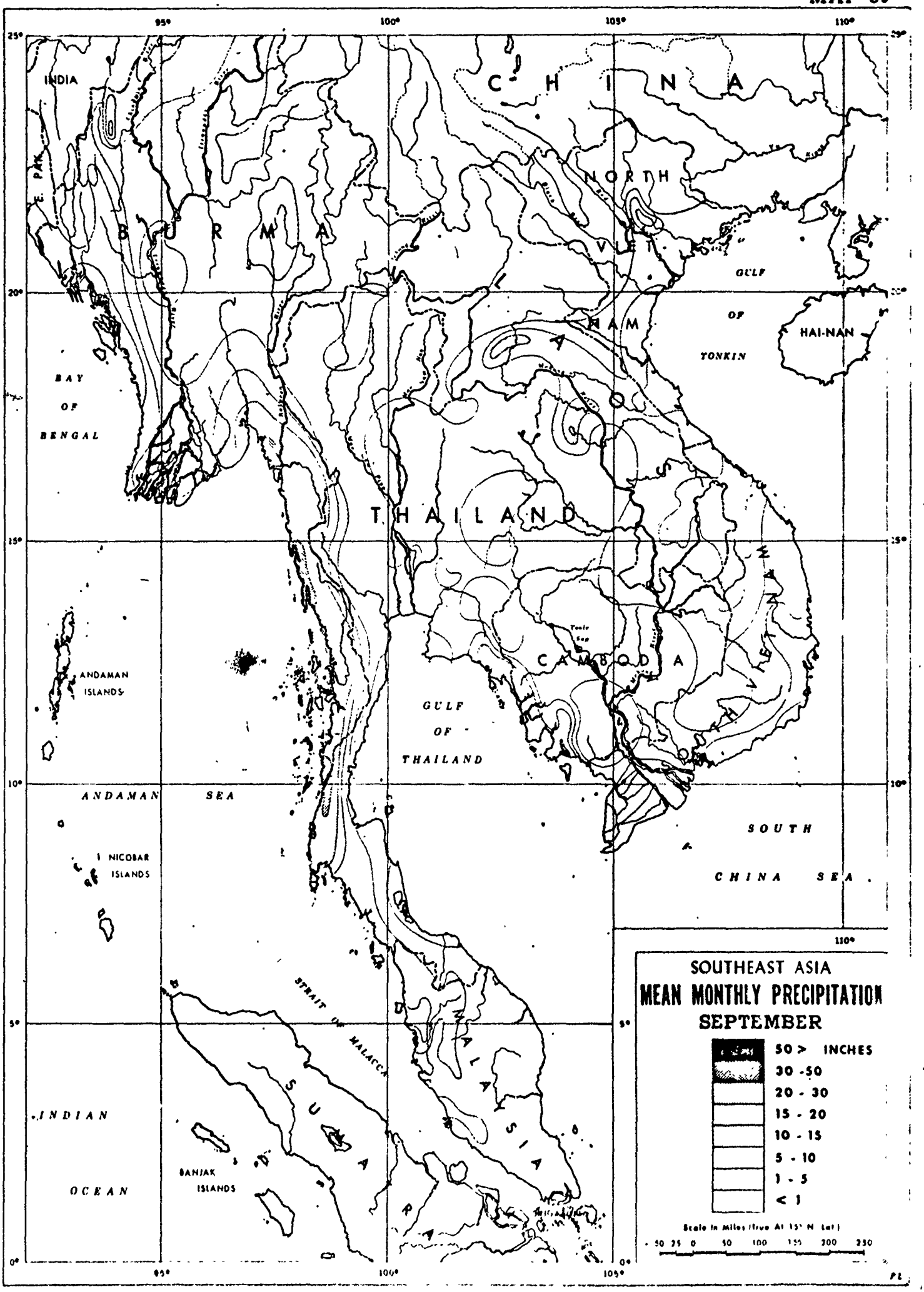

SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
APRIL
50 > INCHES
30 - 50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
CHINA
INDIA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
SOUTH VIETNAM
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

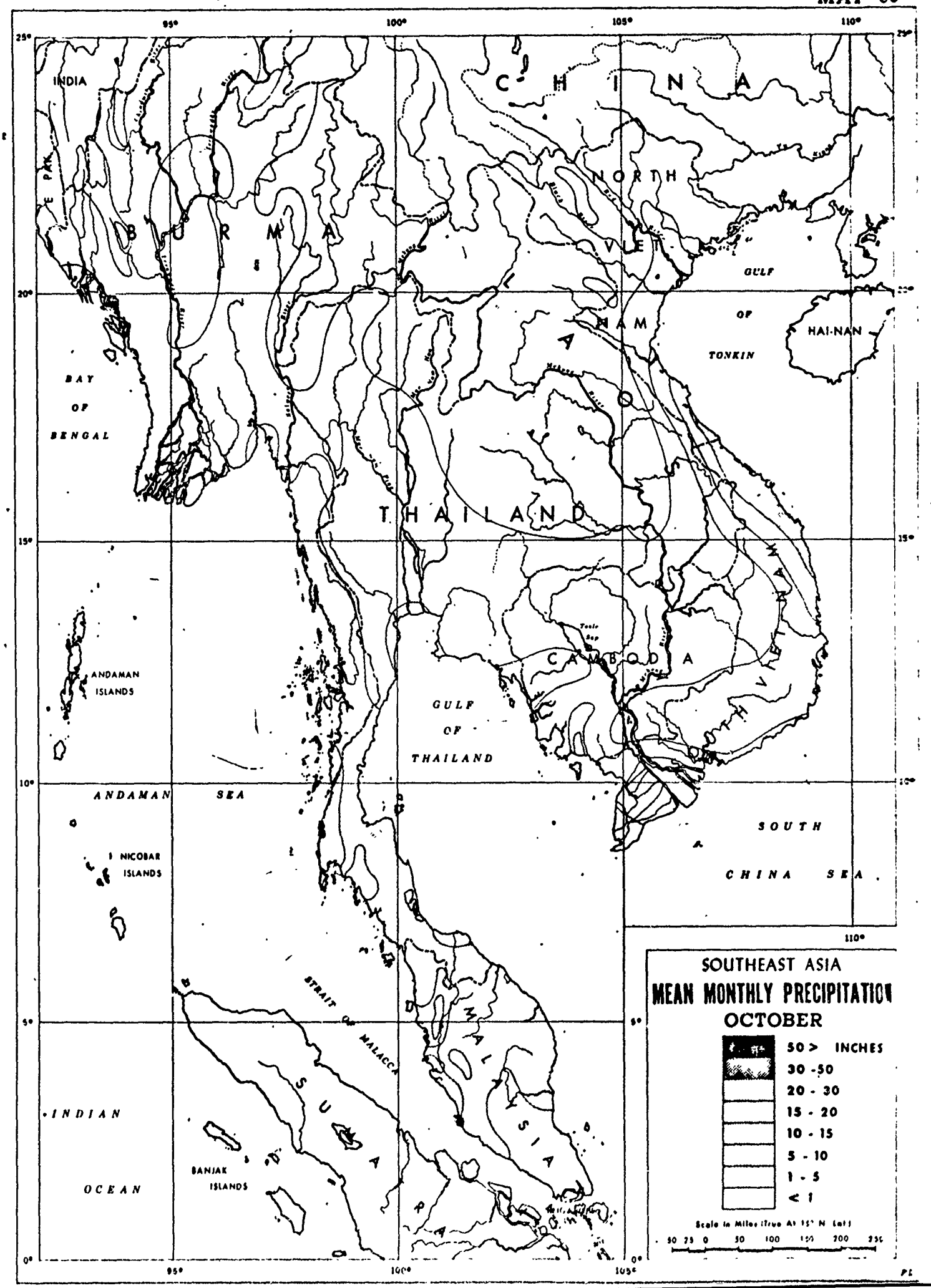

SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
MAY
50 > INCHES
30 - 50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
CHINA
INDIA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
SOUTH VIETNAM
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

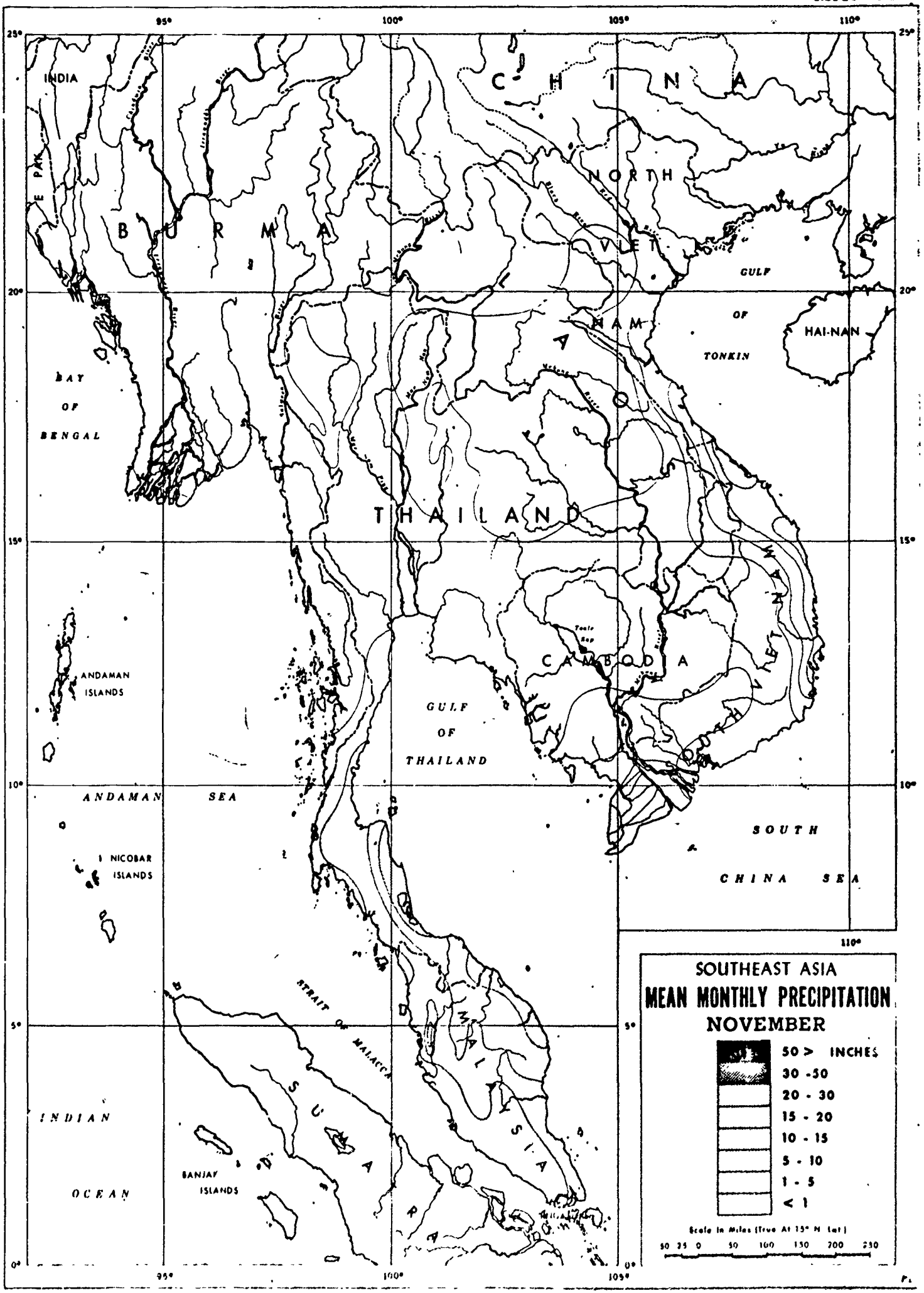

SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
JUNE
50 > INCHES
30 - 50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
LAOS
THAILAND
CAMBODIA
SOUTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
ANDAMAN ISLANDS
NICOBAR ISLANDS
GULF OF THAILAND
ANDAMAN SEA
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

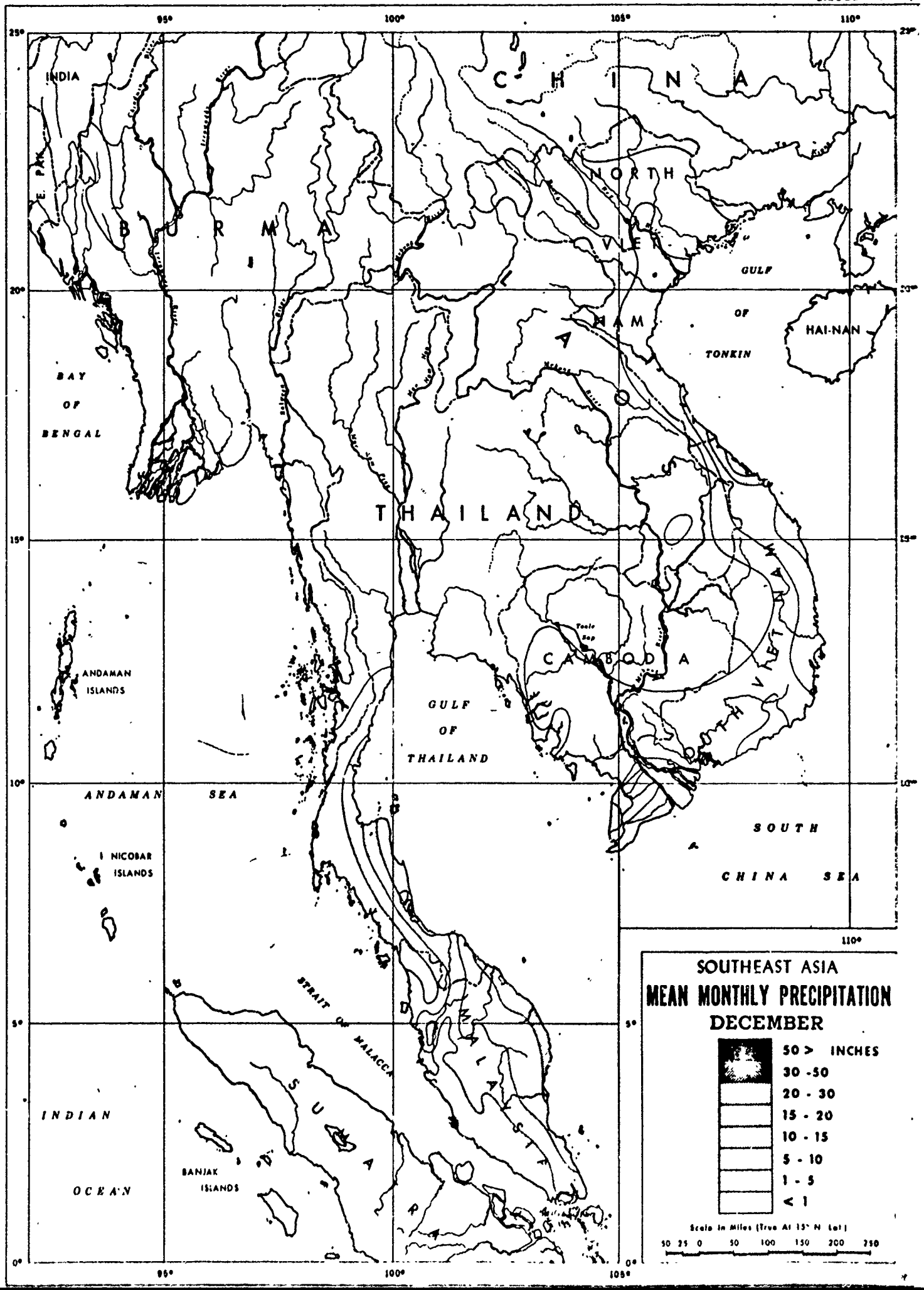

SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
JULY
50 > INCHES
30 - 50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
LAOS
CAMBODIA
SOUTH VIETNAM
GULF OF THAILAND
ANDAMAN ISLANDS
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

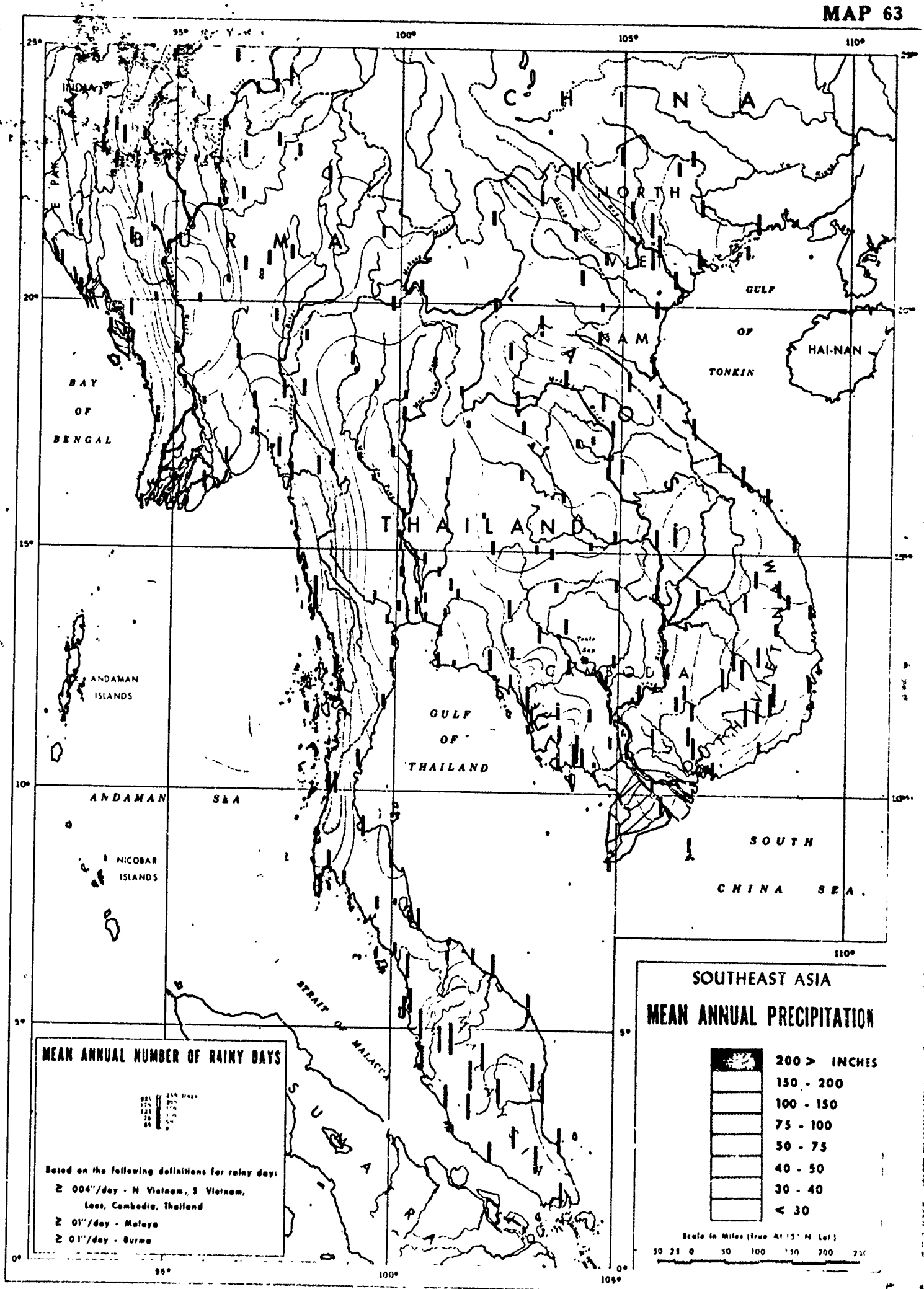

SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
AUGUST
50 > INCHES
30 - 50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
INDIA
CHINA
BURMA
NORTH VIETNAM
LAOS
THAILAND
CAMBODIA
SOUTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
ANDAMAN ISLANDS
NICOBAR ISLANDS
GULF OF THAILAND
ANDAMAN SEA
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYA
SUMATRA
BANJAK ISLANDS
INDIAN OCEAN
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°


SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
SEPTEMBER
50 > INCHES
30 - 50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH
VIET
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
LAOS
CAMBODIA
VIETNAM
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
INDIAN
OCEAN
BANJAK
ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

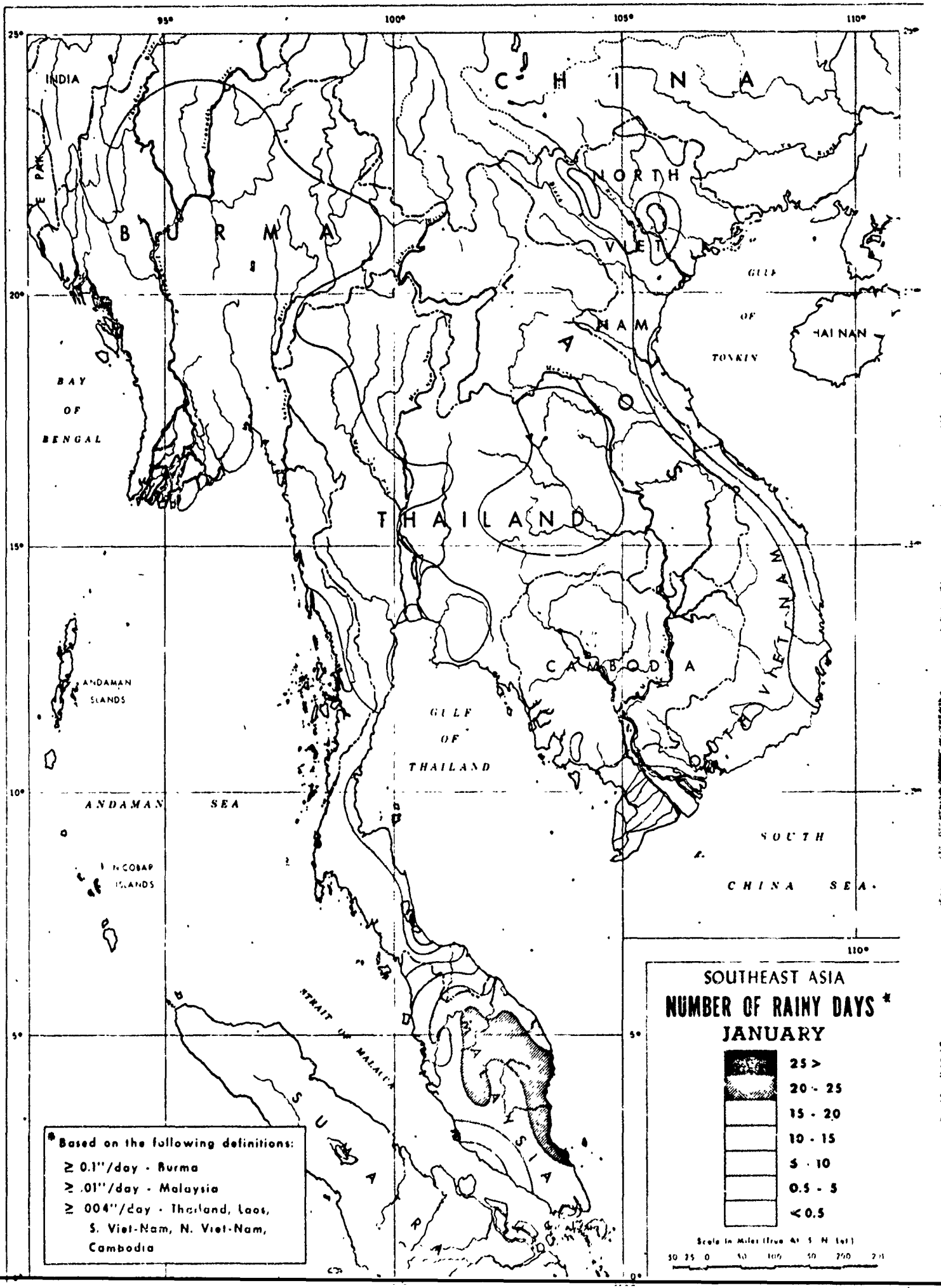

SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
OCTOBER
50 > INCHES
30 - 50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
CHINA
INDIA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
CAMBODIA
SOUTH VIETNAM
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

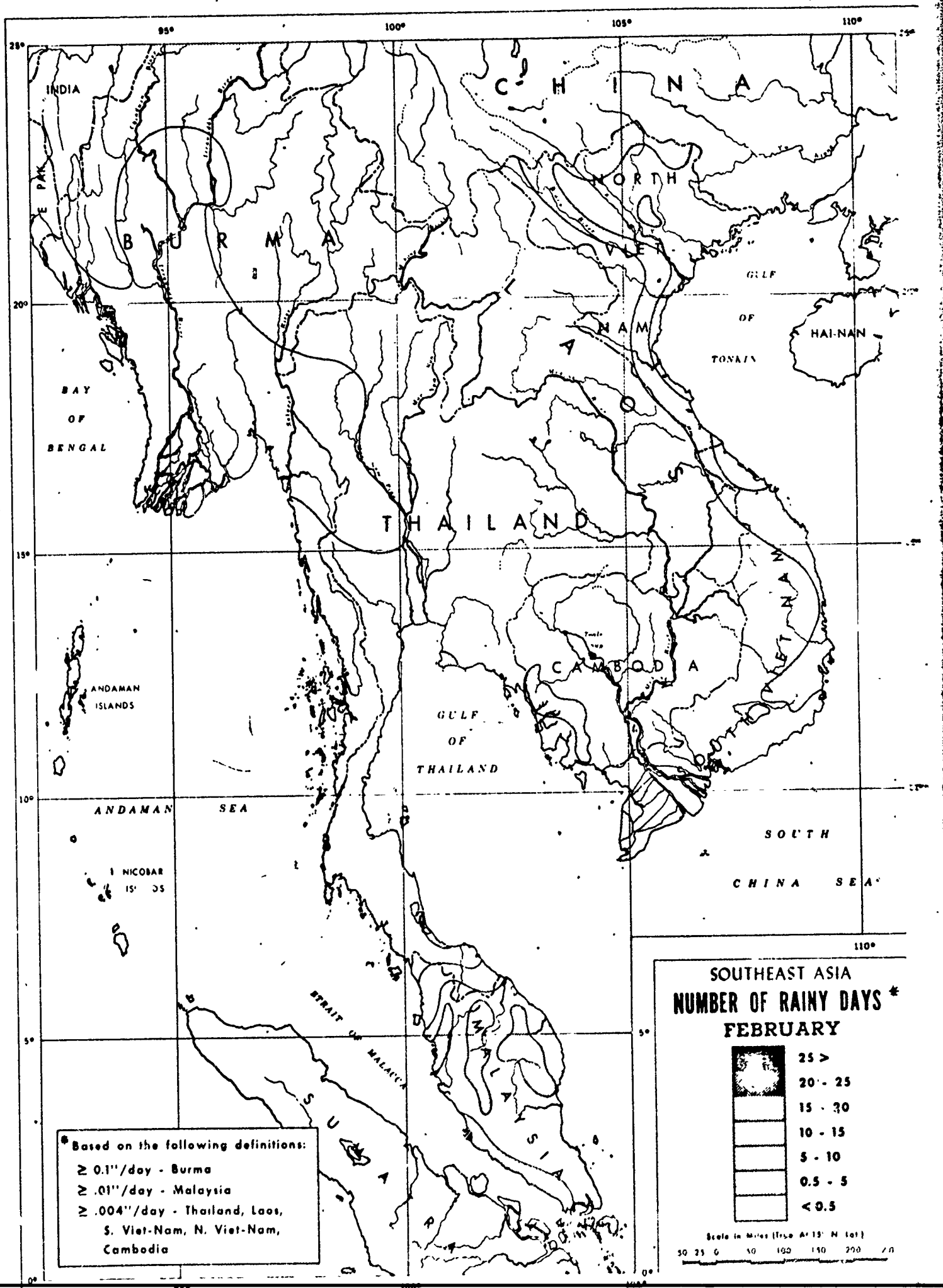

SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
NOVEMBER
50 > INCHES
30 - 50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
LAOS
THAILAND
CAMBODIA
SOUTH VIETNAM
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
INDIAN OCEAN
BANJAR ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

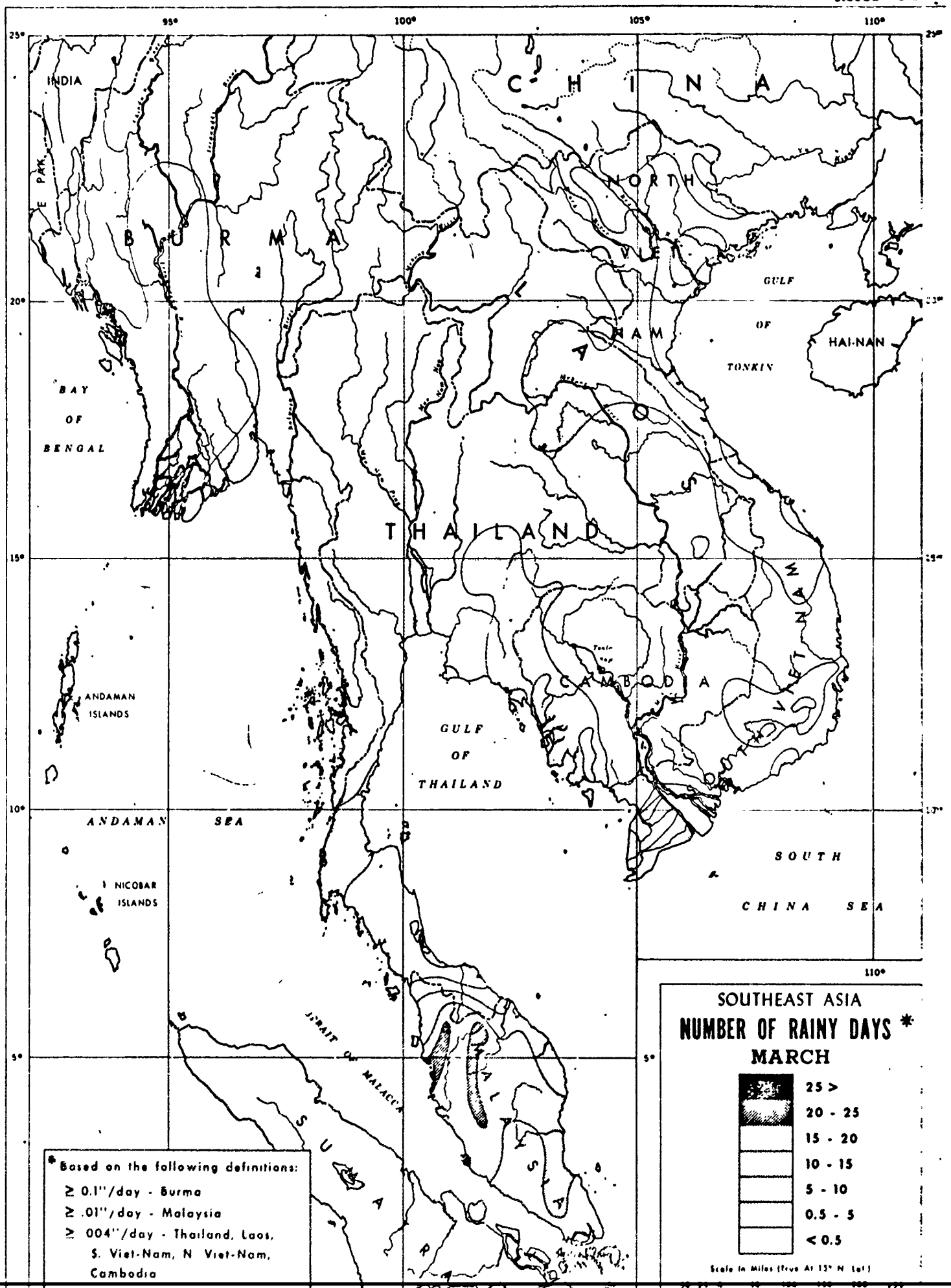

SOUTHEAST ASIA
MEAN MONTHLY PRECIPITATION
DECEMBER
50 > INCHES
30 -50
20 - 30
15 - 20
10 - 15
5 - 10
1 - 5
< 1
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
LAOS
CAMBODIA
SOUTH VIETNAM
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYA
SUMATRA
INDIAN OCEAN
BANJAK ISLANDS
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

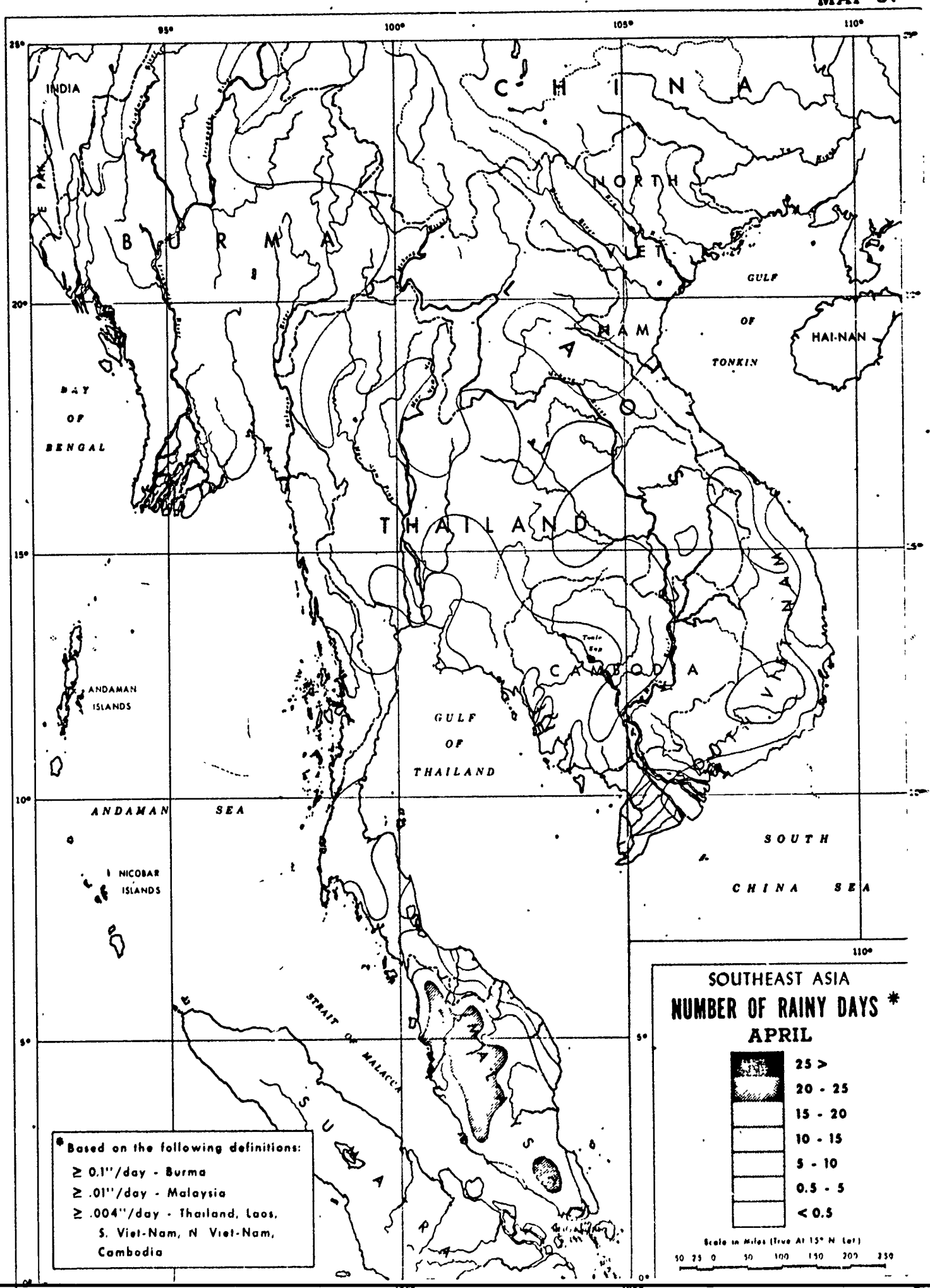

SOUTHEAST ASIA
MEAN ANNUAL PRECIPITATION
200 > INCHES
150 - 200
100 - 150
75 - 100
50 - 75
40 - 50
30 - 40
< 30
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
MEAN ANNUAL NUMBER OF RAINY DAYS
Based on the following definitions for rainy days:
≥ .004"/day - N Vietnam, S Vietnam, Laos, Cambodia, Thailand
≥ .01"/day - Malaya
≥ .01"/day - Burma
CHINA
INDIA
BURMA
NORTH VIETNAM
LAOS
THAILAND
CAMBODIA
SOUTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
ANDAMAN ISLANDS
NICOBAR ISLANDS
ANDAMAN SEA
GULF OF THAILAND
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

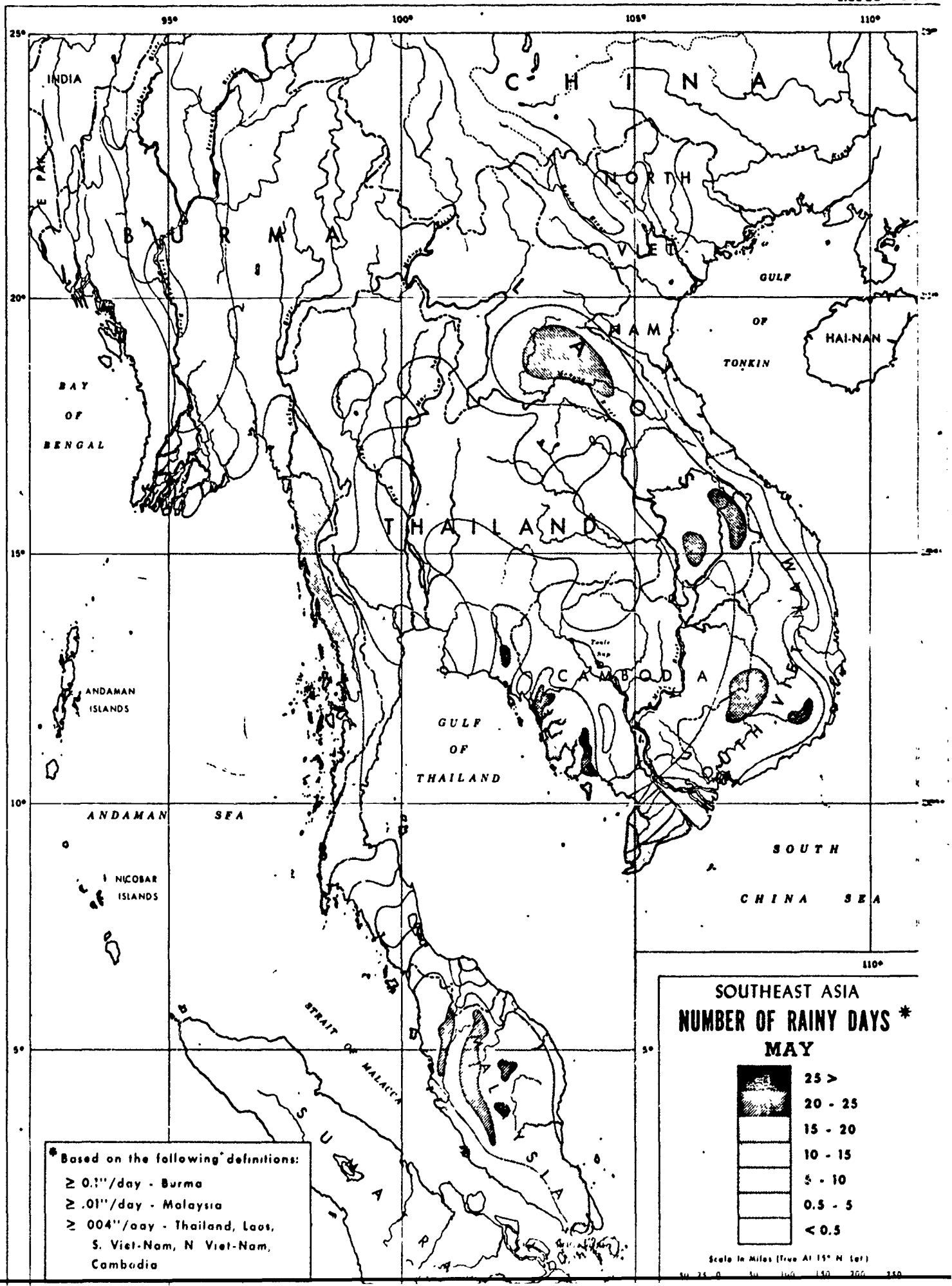
MEAN NUMBER OF RAINY DAYS

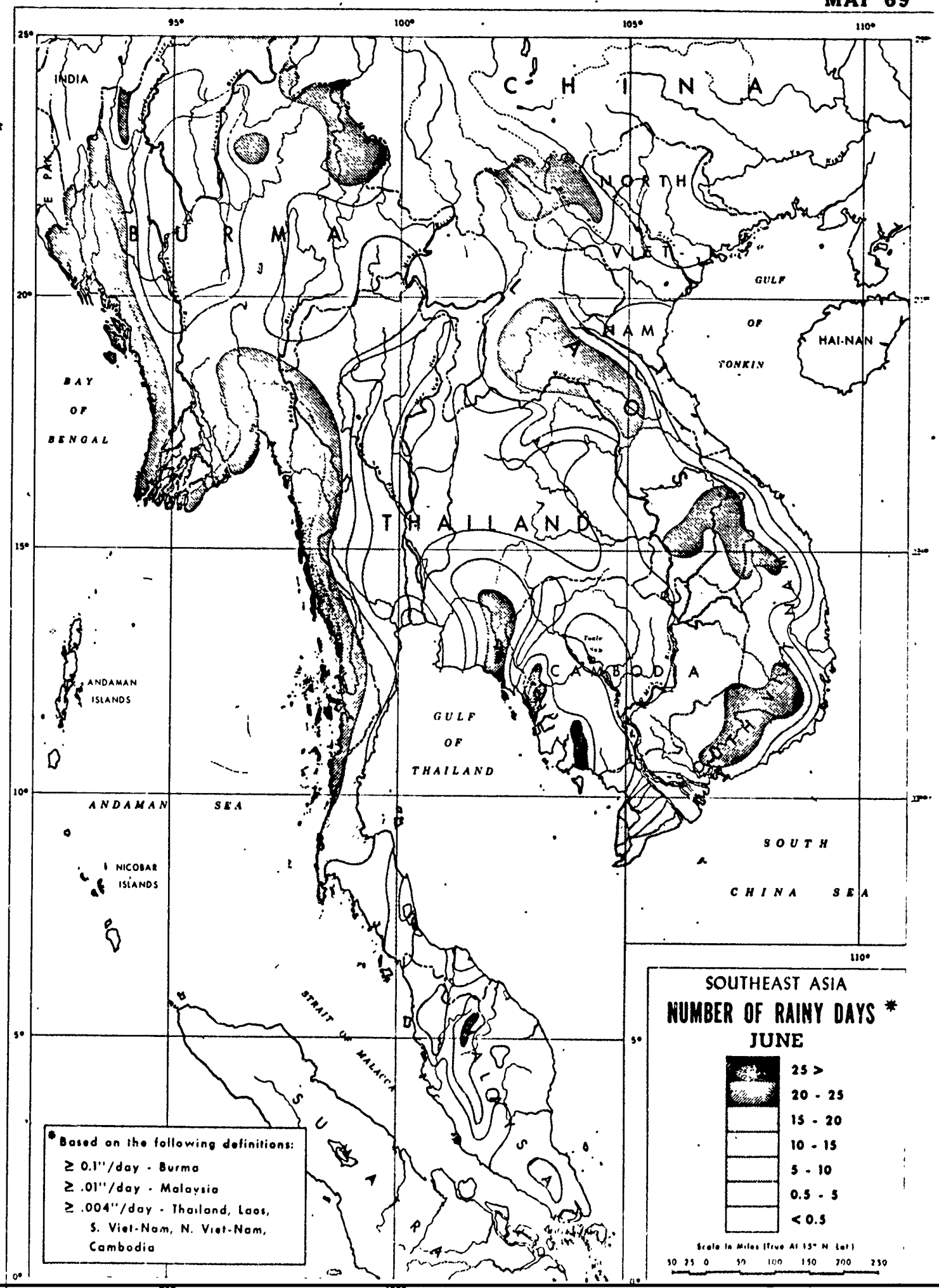

95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
BURMA
NORTH
VIET
NAM
LAOS
GULF
OF
TONKIN
HAINAN
BAY
OF
BENGAL
THAILAND
CAMBODIA
VIETNAM
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
JANUARY
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
*Based on the following definitions:
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ 004"/day - Thailand, Laos, S. Viet-Nam, N. Viet-Nam, Cambodia

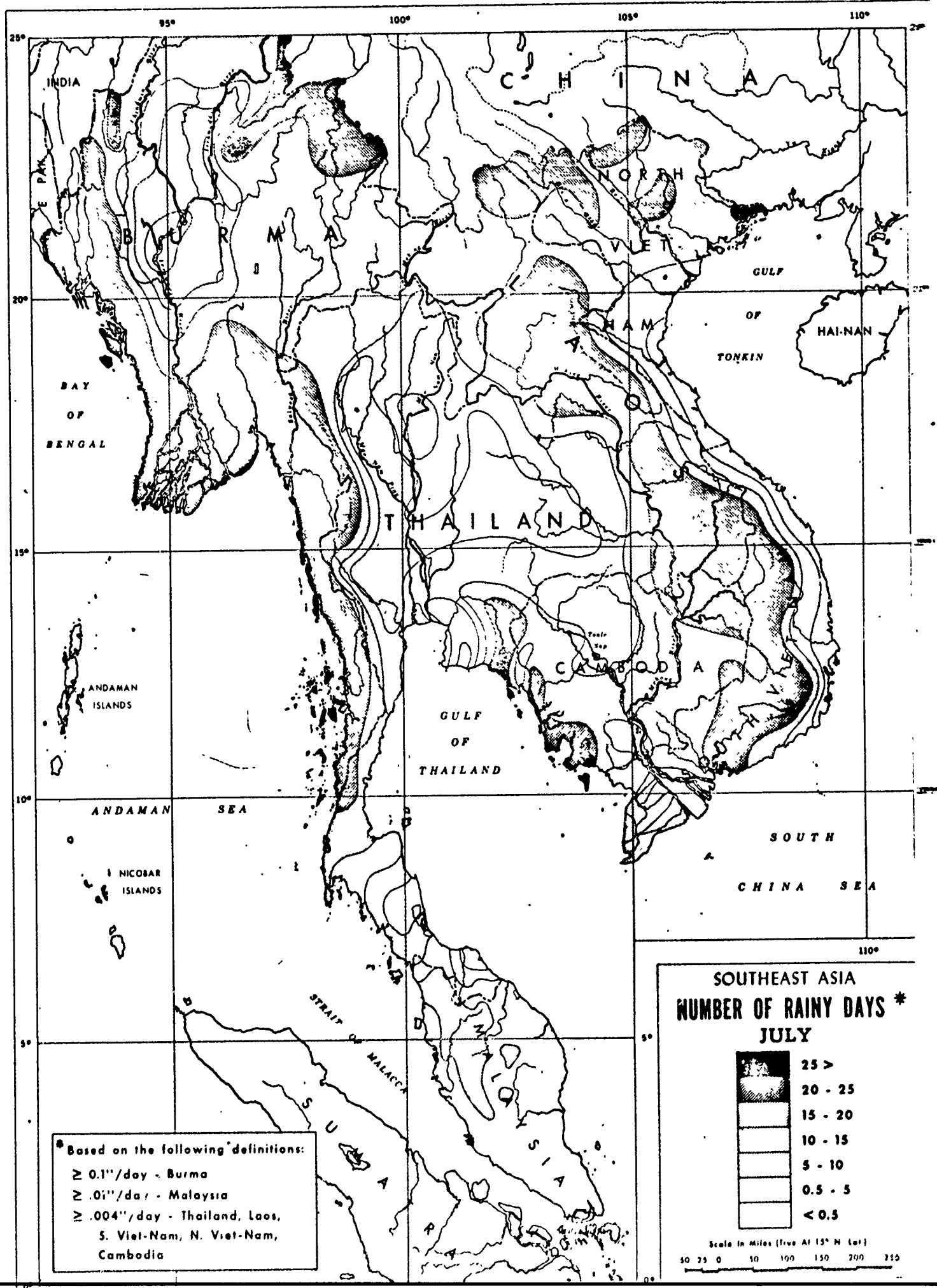

SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
FEBRUARY
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
* Based on the following definitions:
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ .004"/day - Thailand, Laos, S. Viet-Nam, N. Viet-Nam, Cambodia
CHINA
INDIA
BURMA
NORTH VIETNAM
LAOS
THAILAND
CAMBODIA
SOUTH VIETNAM
MALAYSIA
SUMATRA
BAY OF BENGAL
ANDAMAN SEA
ANDAMAN ISLANDS
NICOBAR ISLANDS
GULF OF THAILAND
GULF OF TONKIN
HAI-NAN
SOUTH CHINA SEA
STRAIT OF MALACCA
95°
100°
105°
110°
20°
15°
10°
5°
0°

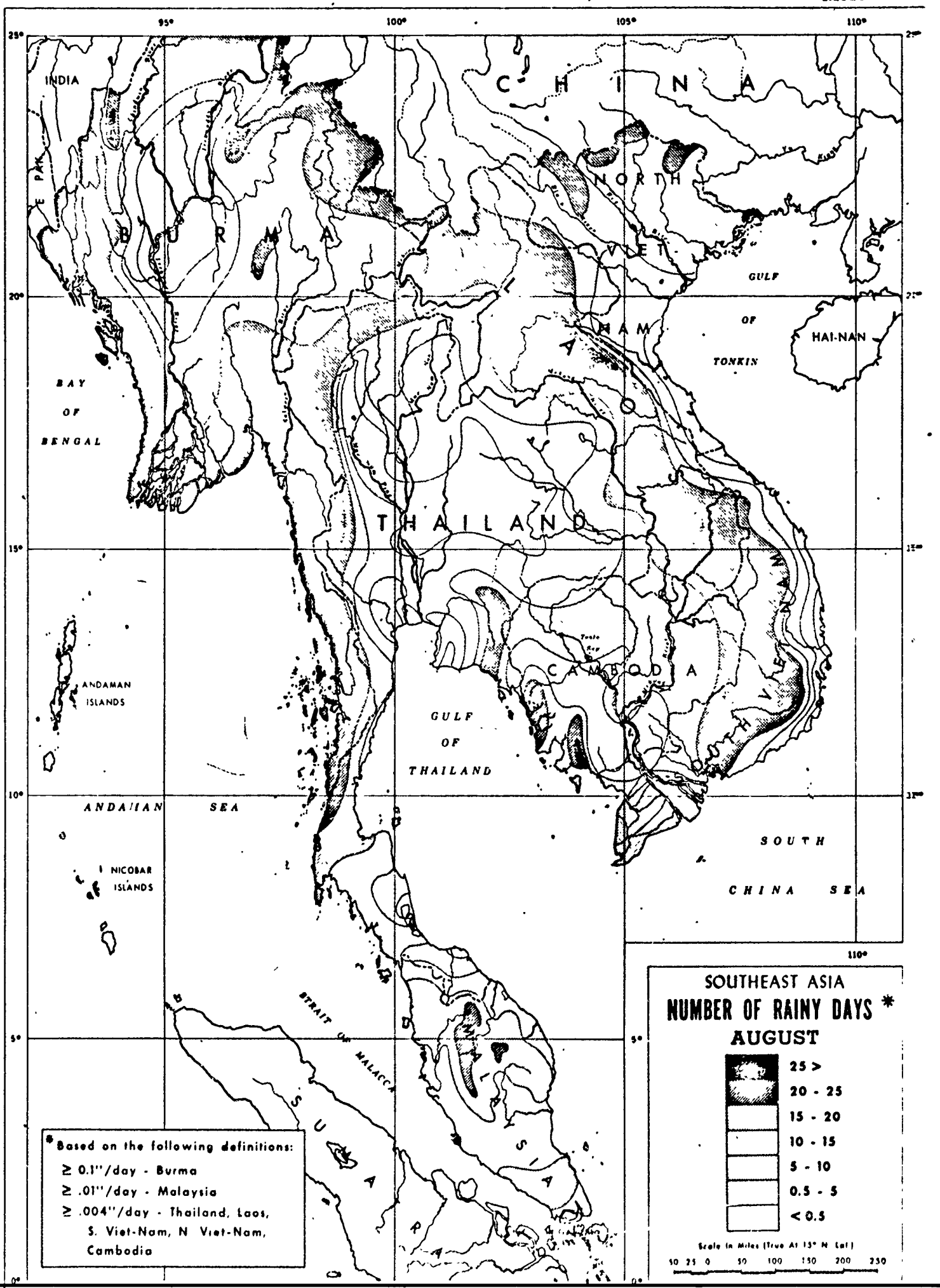

95°
100°
105°
110°
25°
20°
15°
10°
5°
INDIA
CHINA
BURMA
NORTH
VIET
NAM
LAOS
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
ANNAM
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
MARCH
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
Scale in Miles (True At 15° N Lat.)
* Based on the following definitions:
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ 004"/day - Thailand, Laos,
S. Viet-Nam, N Viet-Nam,
Cambodia

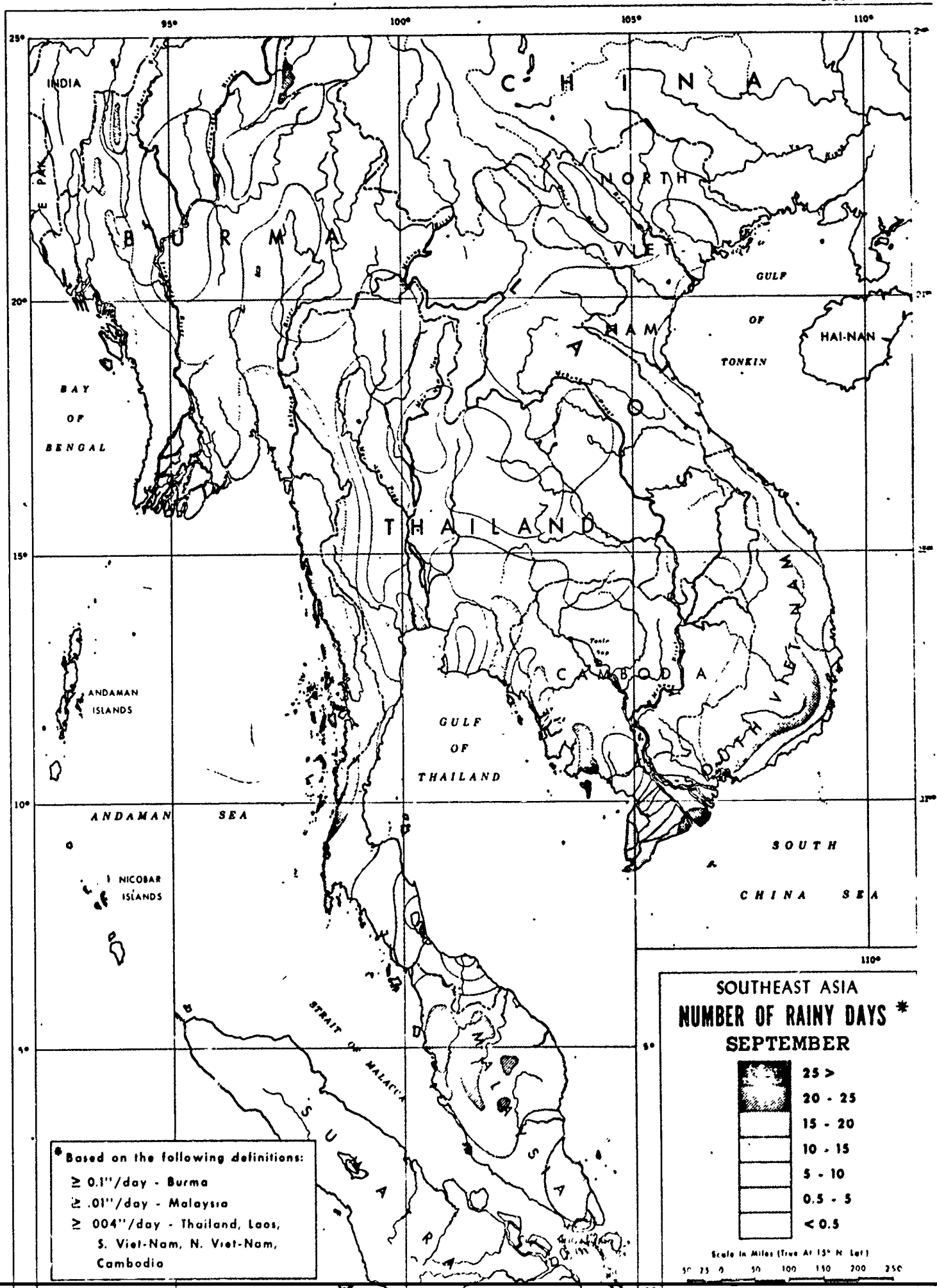

95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
BURMA
NORTH
VIET
GULF
OF
TONKIN
HAI-NAN
LAOS
BAY
OF
BENGAL
THAILAND
ANNAM
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
SUMATRA
SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
APRIL
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
*Based on the following definitions:
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ .004"/day - Thailand, Laos, S. Viet-Nam, N Viet-Nam, Cambodia

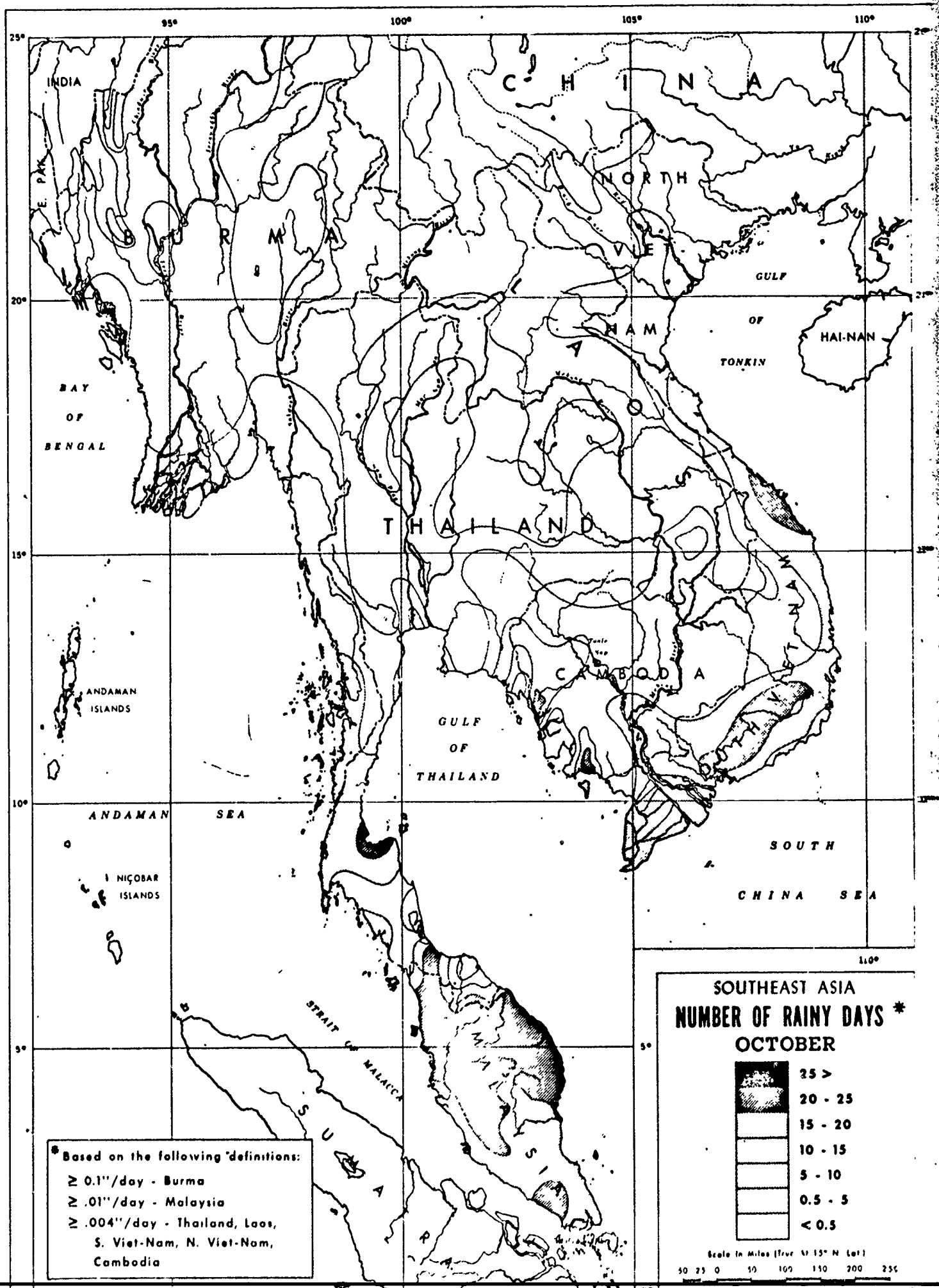

SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
MAY
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
Scale In Miles (True At 15° N Lat)
* Based on the following definitions:
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ 004"/day - Thailand, Laos, S. Viet-Nam, N Viet-Nam, Cambodia
INDIA
CHINA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
LAOS
CAMBODIA
SOUTH VIETNAM
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
95°
100°
105°
110°
25°
20°
15°
10°
5°

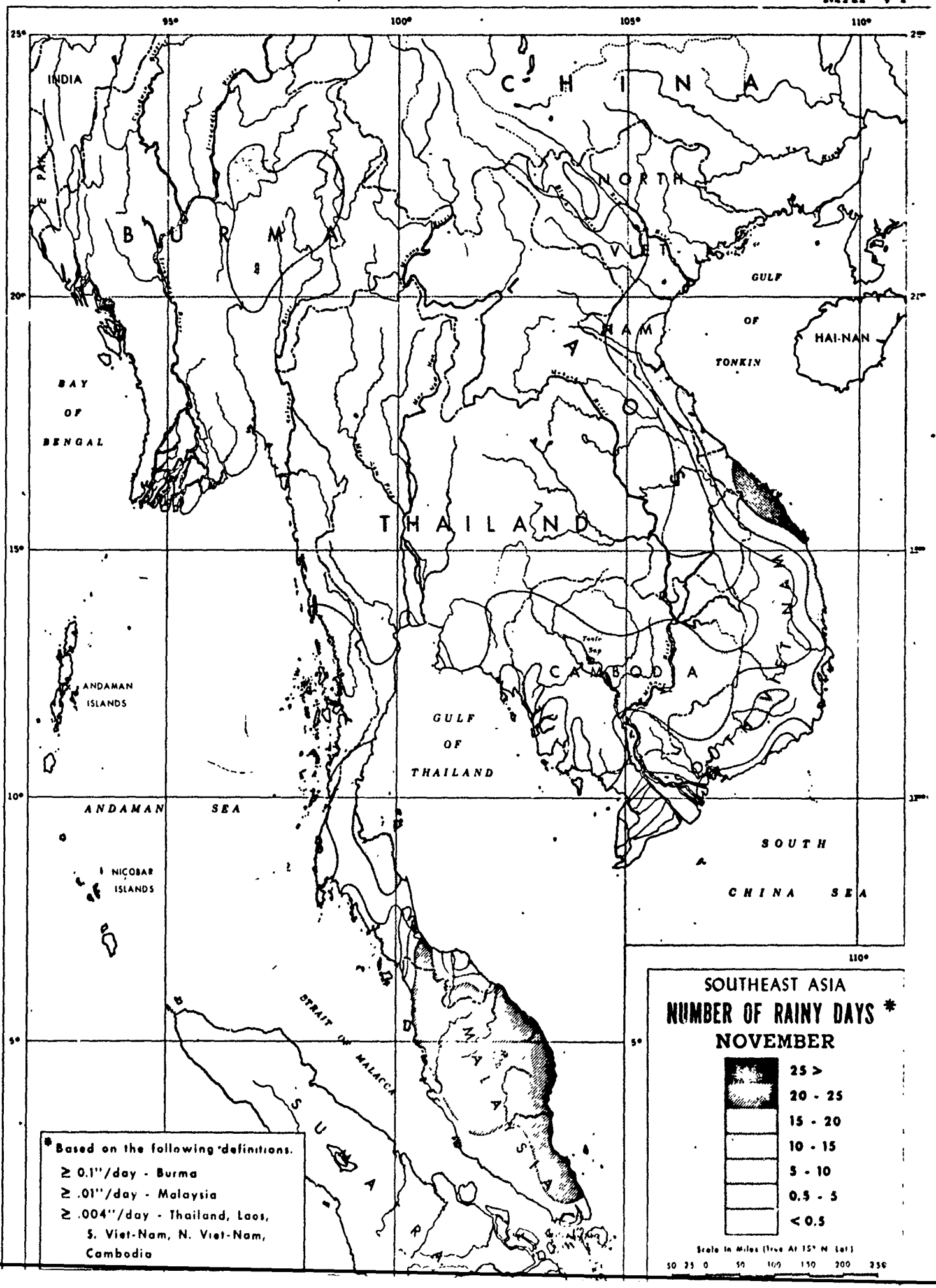

SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
JUNE
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
Scale In Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
* Based on the following definitions:
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ .004"/day - Thailand, Laos, S. Viet-Nam, N. Viet-Nam, Cambodia
INDIA
CHINA
BURMA
NORTH VIET NAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
LAOS
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

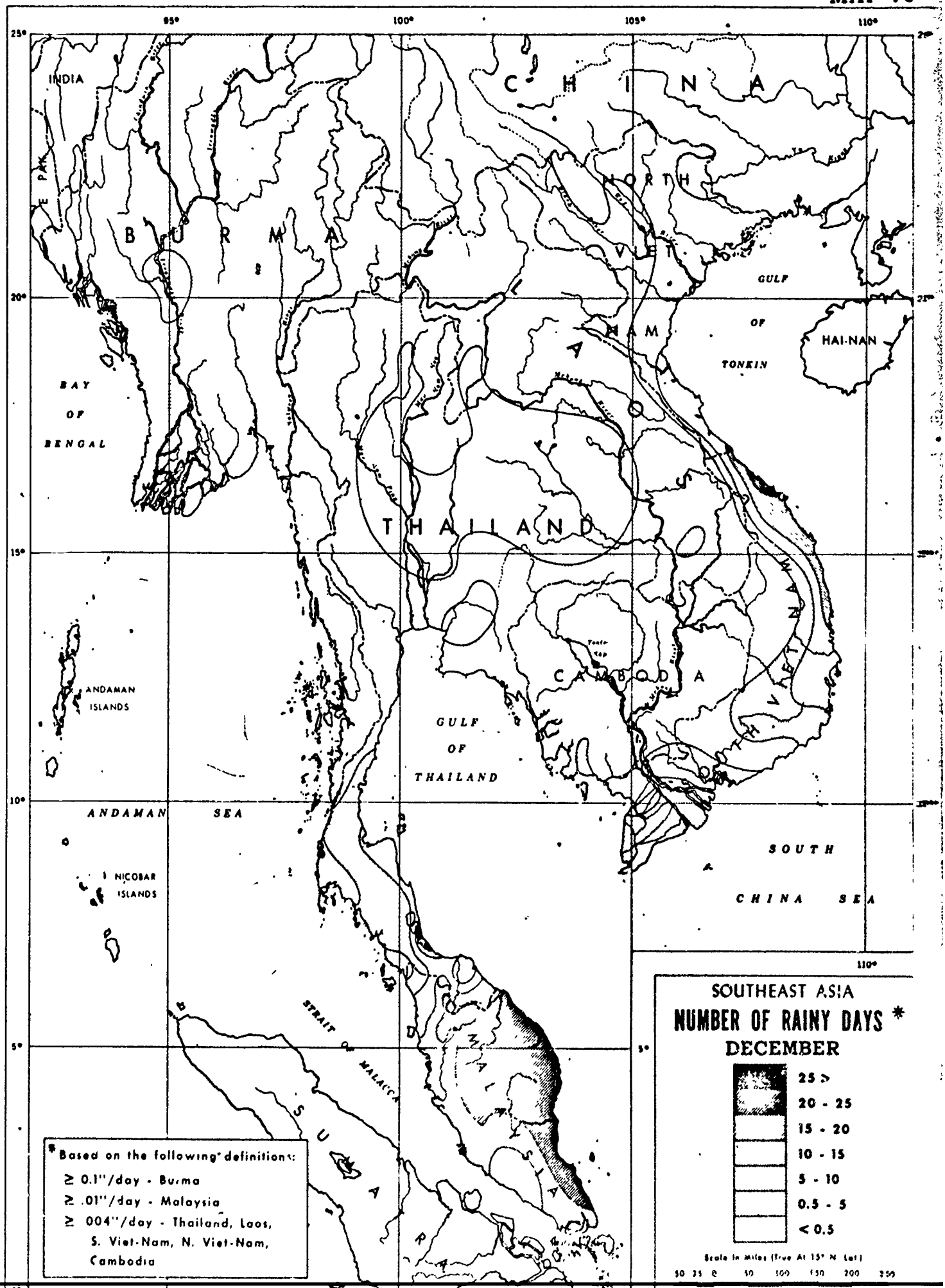

95°
100°
105°
110°
25°
20°
15°
10°
5°
0°
INDIA
CHINA
NORTH
VIET
NAM
LAOS
BURMA
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
THAILAND
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
JULY
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
Scale in Miles (True At 15° N. Lat.)
50 25 0 50 100 150 200 250
* Based on the following definitions:
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ .004"/day - Thailand, Laos, S. Viet-Nam, N. Viet-Nam, Cambodia


SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
AUGUST
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
*Based on the following definitions:
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ .004"/day - Thailand, Laos, S. Viet-Nam, N Viet-Nam, Cambodia
INDIA
CHINA
NORTH VIET-NAM
BURMA
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
LAOS
THAILAND
CAMBODIA
SOUTH VIET-NAM
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°

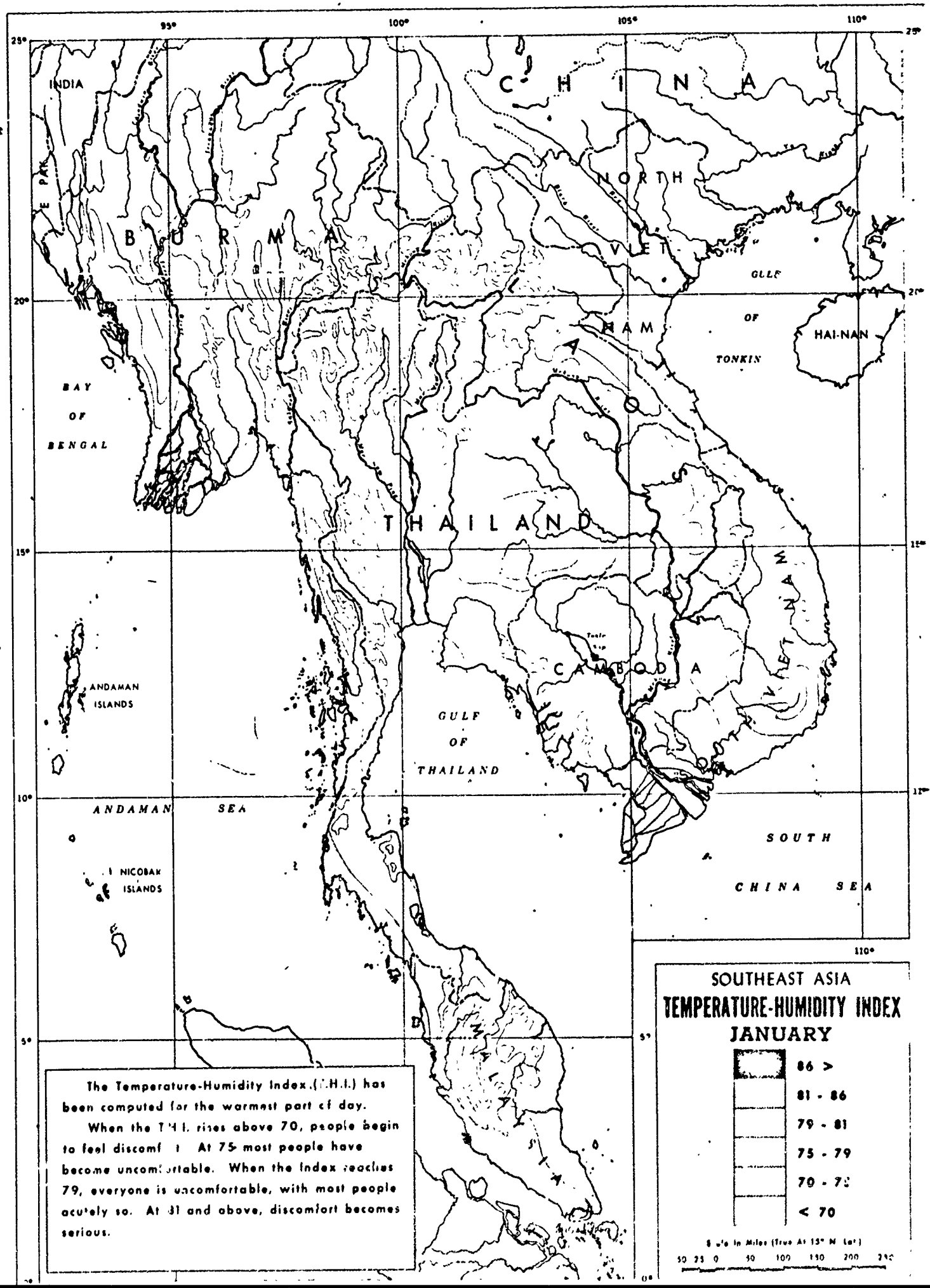

SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
SEPTEMBER
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
Scale In Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
* Based on the following definitions:
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ 004"/day - Thailand, Laos, S. Viet-Nam, N. Viet-Nam, Cambodia
INDIA
CHINA
BURMA
NORTH VIET NAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
LAOS
CAMBODIA
SOUTH VIETNAM
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
95°
100°
105°
110°
25°
20°
15°
10°
5°


SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
OCTOBER
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
Scale in Miles (Fror At 15° N Lat)
50 25 0 50 100 150 200 250
*Based on the following definitions:
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ .004"/day - Thailand, Laos, S. Viet-Nam, N. Viet-Nam, Cambodia
CHINA
INDIA
BURMA
NORTH VIET NAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
LAOS
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
SUMATRA
MALAYSIA
95°
100°
105°
110°
25°
20°
15°
10°
5°


95°
100°
105°
110°
25°
20°
15°
10°
5°
INDIA
CHINA
NORTH VIET NAM
BURMA
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
LAOS
CAMBODIA
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
NICOBAR ISLANDS
SOUTH CHINA SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
NOVEMBER
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
* Based on the following definitions.
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ .004"/day - Thailand, Laos, S. Viet-Nam, N. Viet-Nam, Cambodia

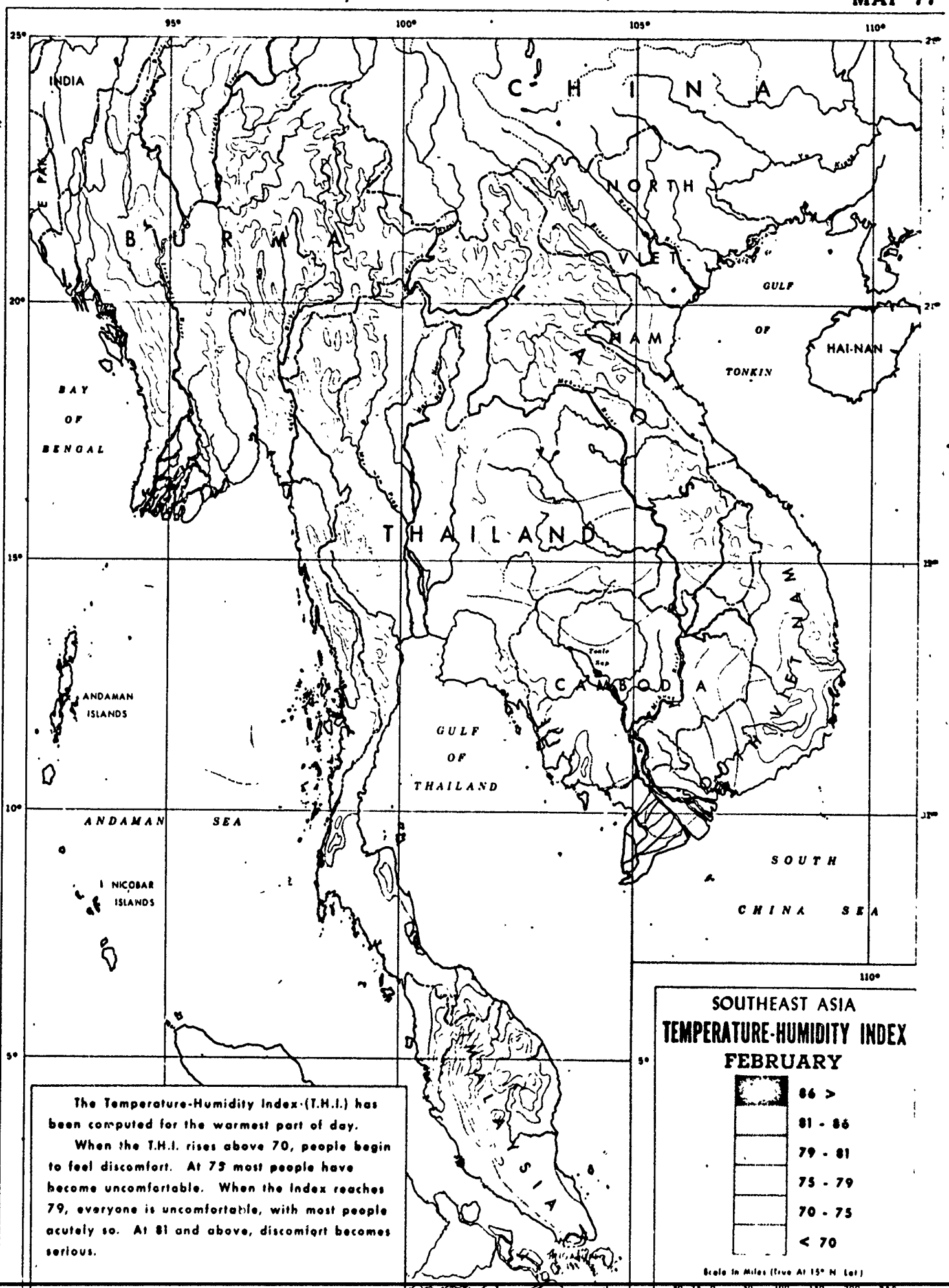

95°
100°
105°
110°
25°
20°
15°
10°
5°
INDIA
CHINA
NORTH
VIET
NAM
BURMA
LAOS
THAILAND
CAMBODIA
GULF
OF
TONKIN
HAI-NAN
BAY
OF
BENGAL
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
STRAIT OF MALACCA
MALAYSIA
SUMATRA
SOUTHEAST ASIA
NUMBER OF RAINY DAYS *
DECEMBER
25 >
20 - 25
15 - 20
10 - 15
5 - 10
0.5 - 5
< 0.5
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
* Based on the following definitions:
≥ 0.1"/day - Burma
≥ .01"/day - Malaysia
≥ 004"/day - Thailand, Laos, S. Viet-Nam, N. Viet-Nam, Cambodia

TEMPERATURE-HUMIDITY INDEX



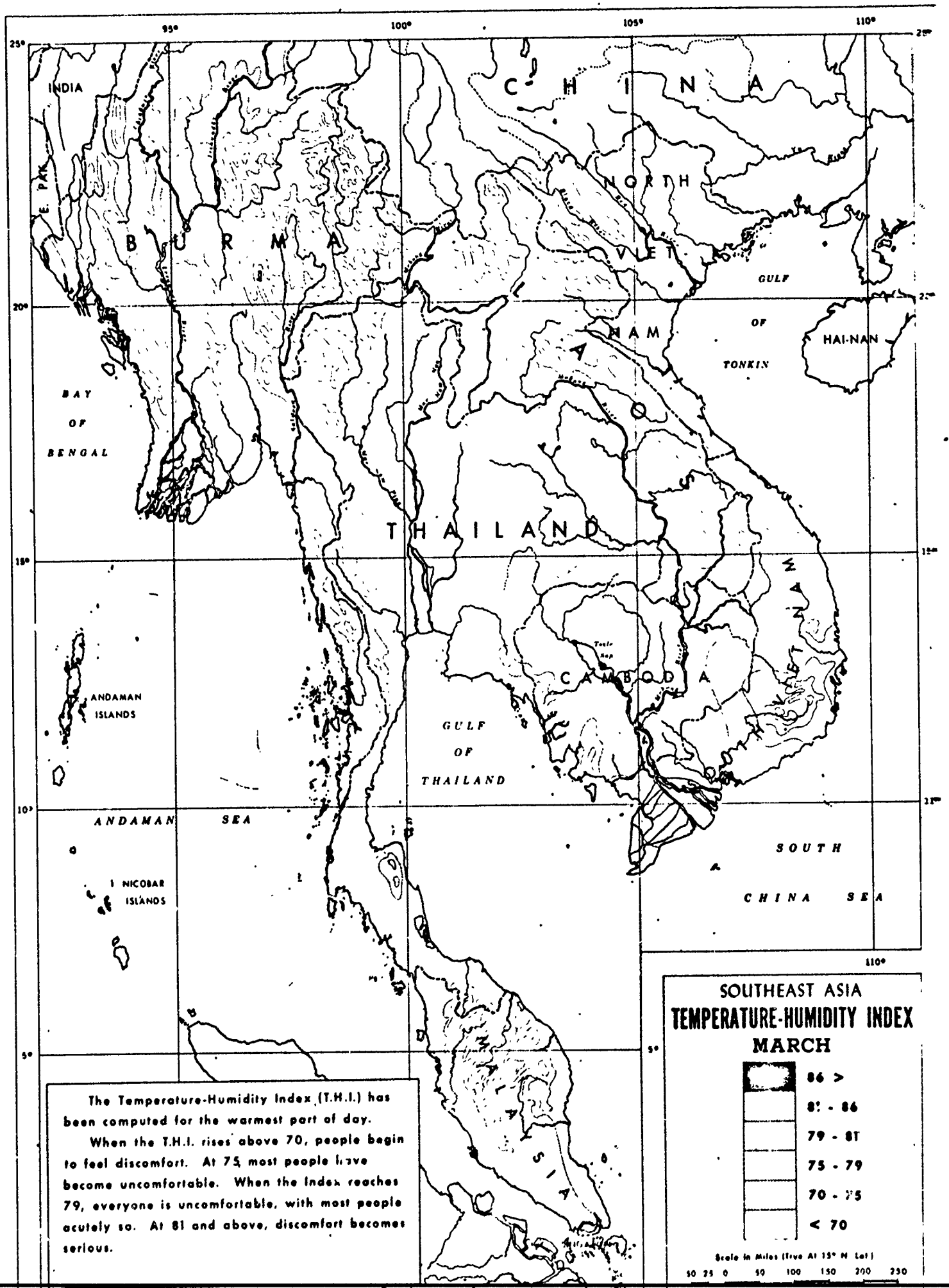
The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.

When the T.H.I. rises above 70, people begin to feel discomfort. At 75 most people have become uncomfortable. When the index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.



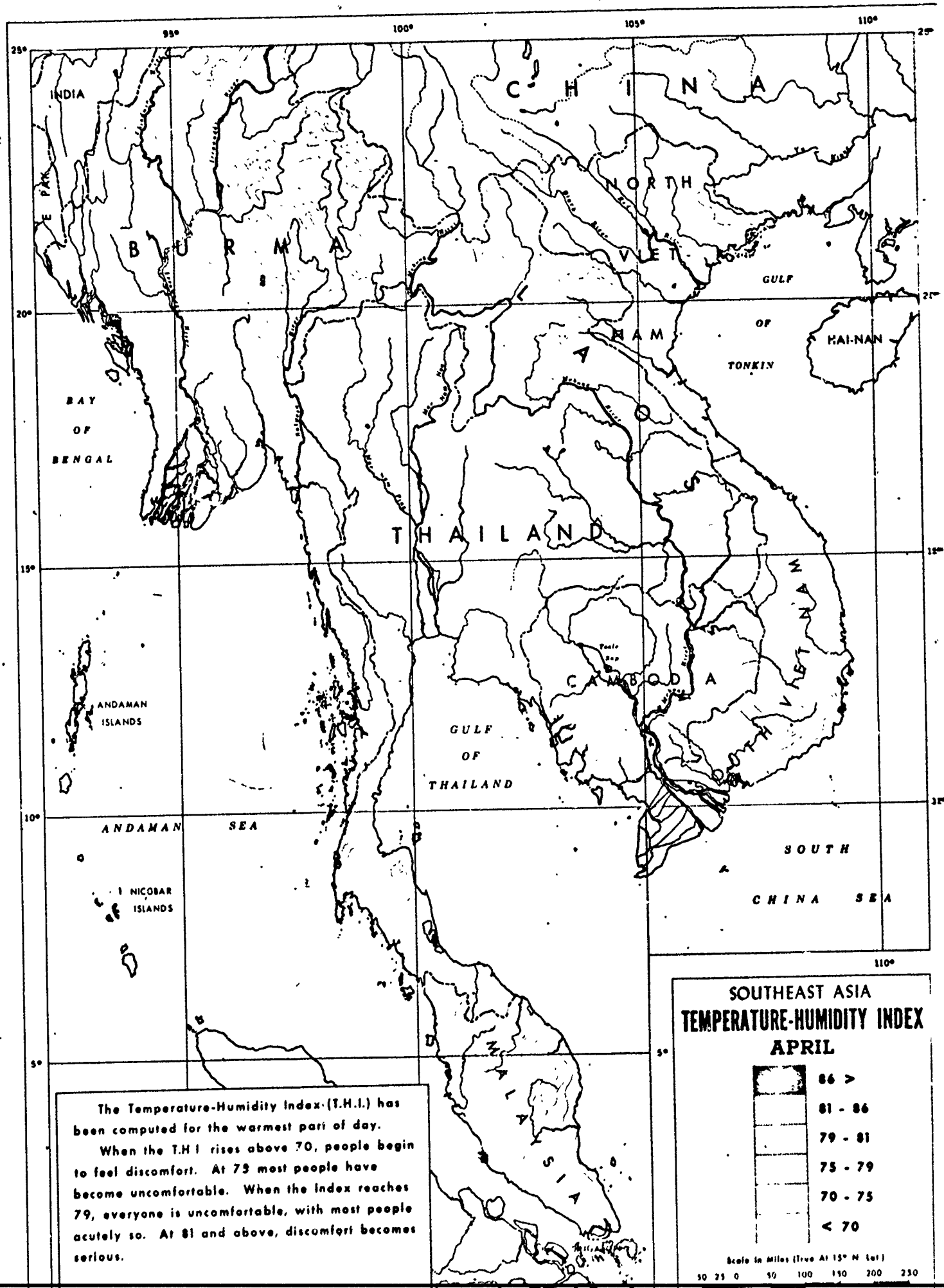
The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.

When the T.H.I. rises above 70, people begin to feel discomfort. At 75 most people have become uncomfortable. When the Index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.



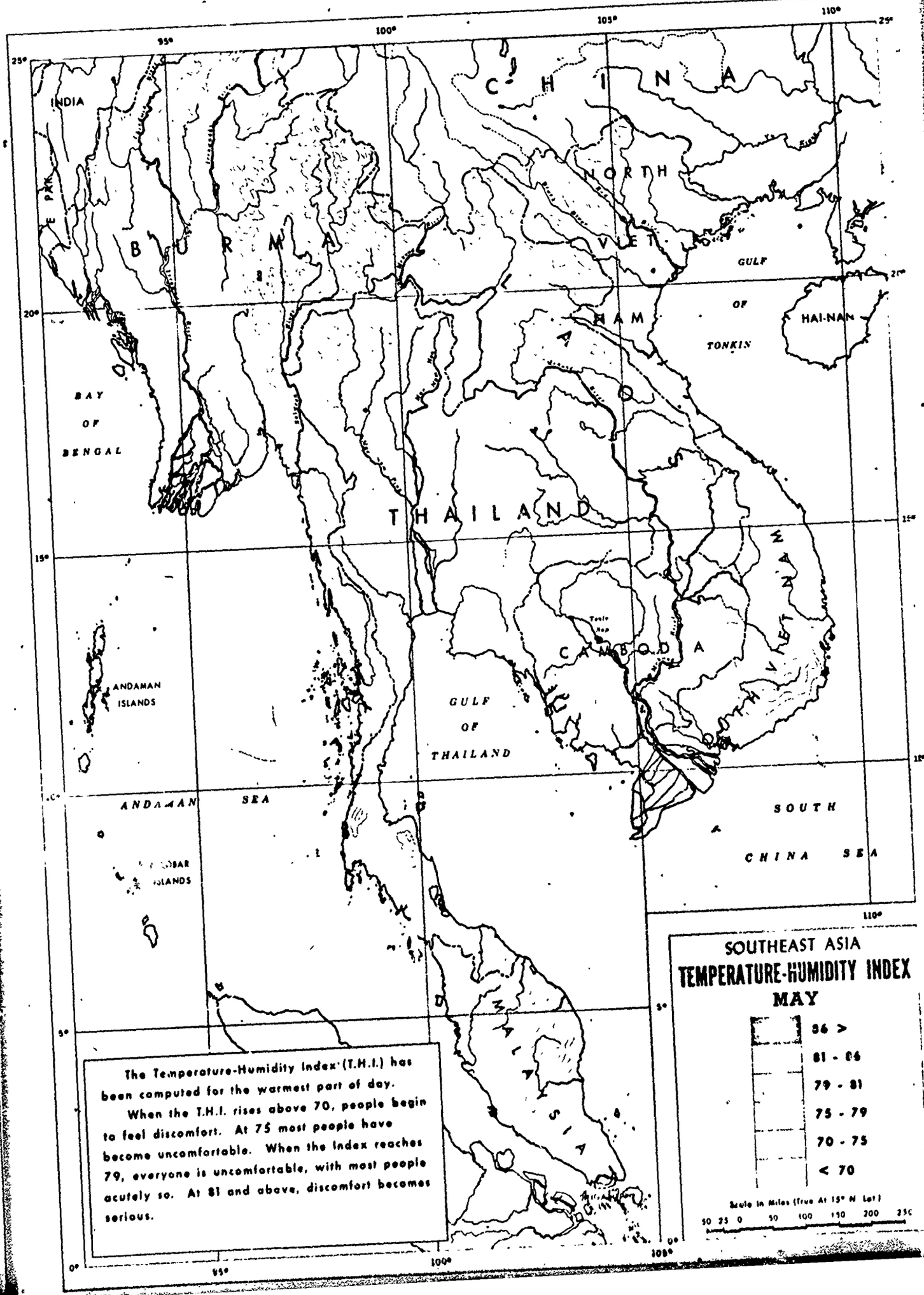
The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.

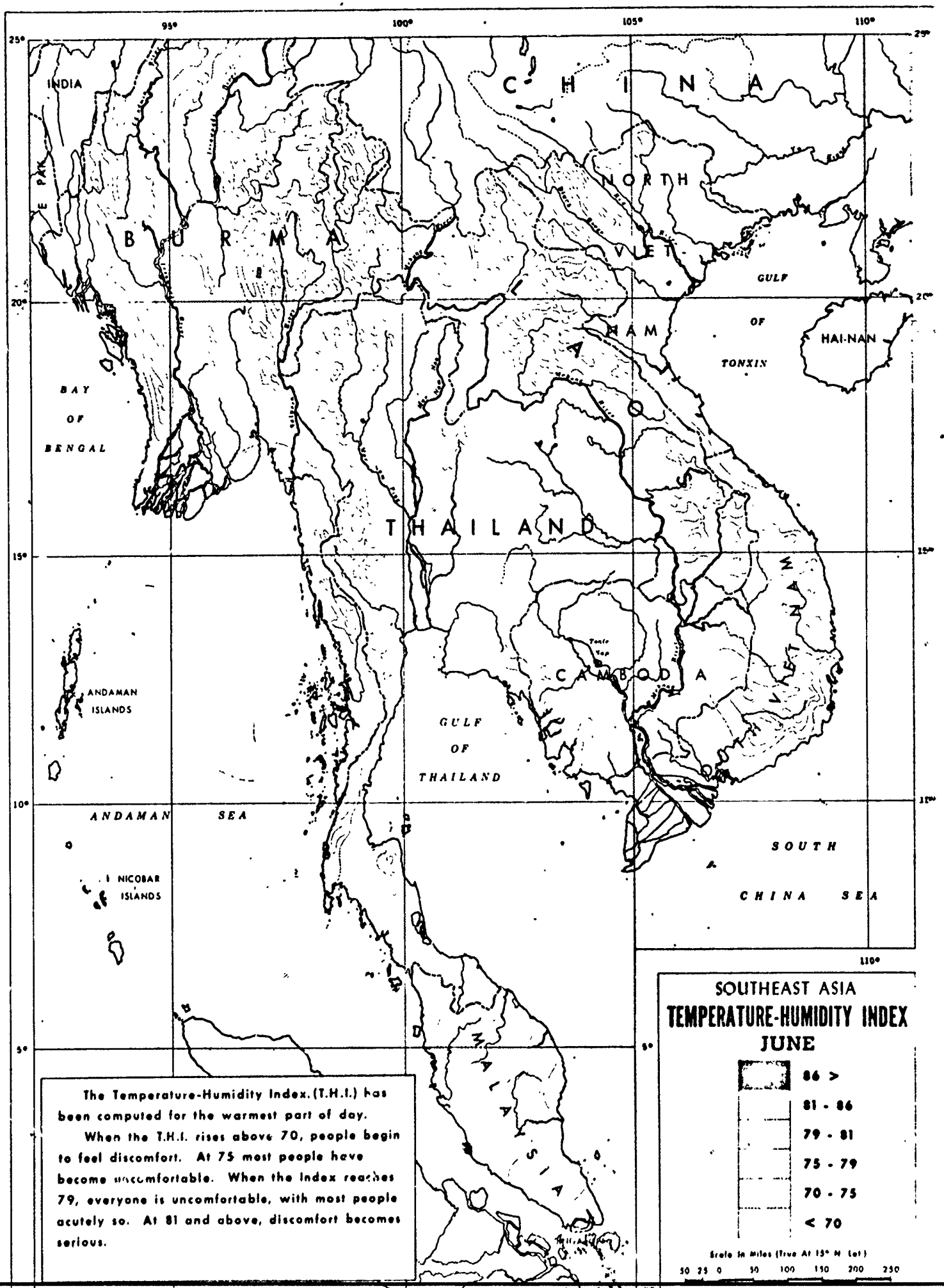
When the T.H.I. rises above 70, people begin to feel discomfort. At 75, most people have become uncomfortable. When the Index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.



The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.

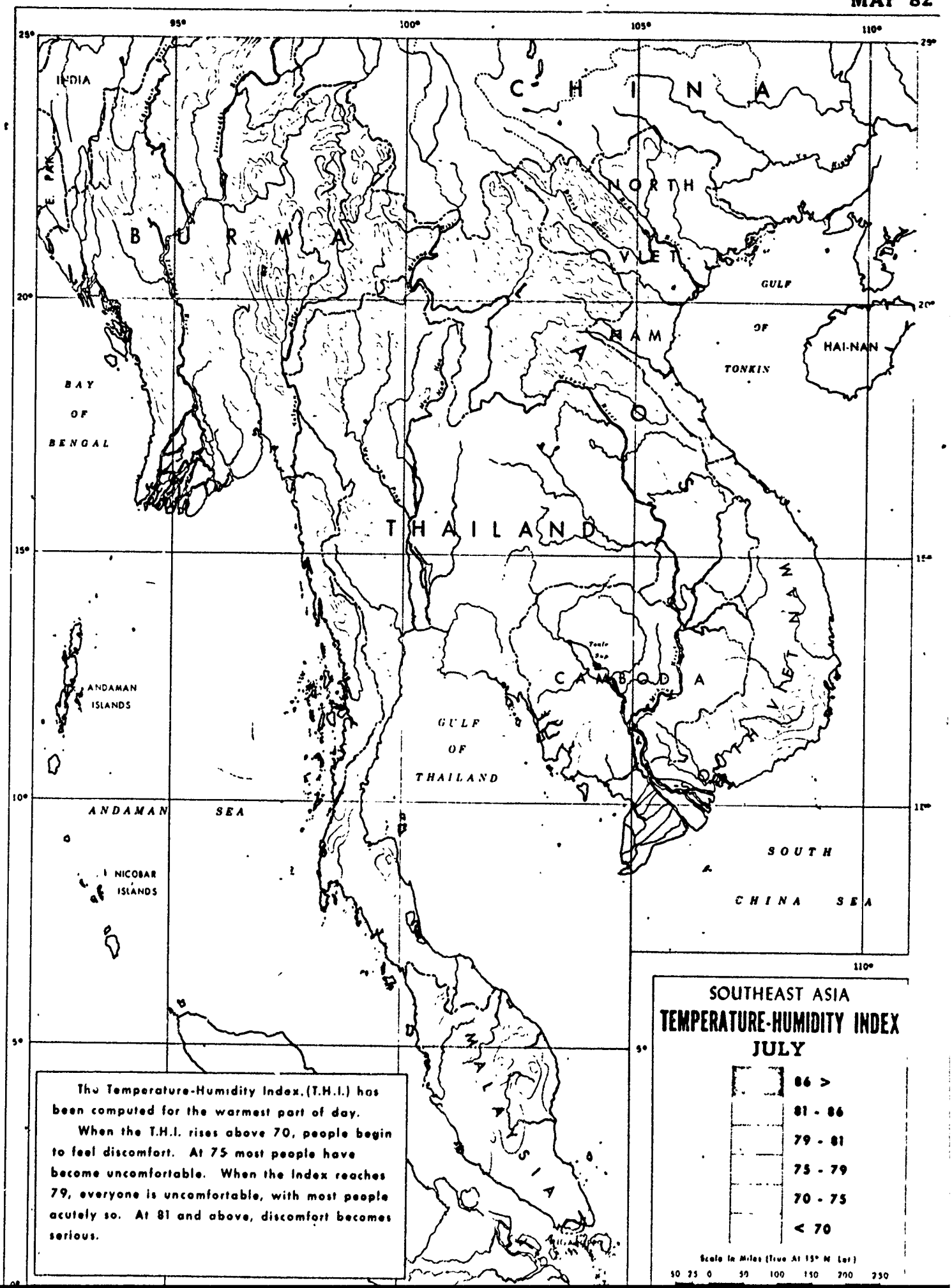
When the T.H.I. rises above 70, people begin to feel discomfort. At 75 most people have become uncomfortable. When the index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.


SOUTHEAST ASIA
TEMPERATURE-HUMIDITY INDEX
MAY
86 >
81 - 86
79 - 81
75 - 79
70 - 75
< 70
Scale in Miles (True At 15° N Lat.)
50 25 0 50 100 150 200 250
The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.
When the T.H.I. rises above 70, people begin to feel discomfort. At 75 most people have become uncomfortable. When the index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.
CHINA
INDIA
BURMA
NORTH VIETNAM
GULF OF TONKIN
HAI-NAN
BAY OF BENGAL
THAILAND
LAOS
CAMBODIA
SOUTH VIETNAM
ANDAMAN ISLANDS
GULF OF THAILAND
ANDAMAN SEA
SOUTH CHINA SEA
MALAYA
95°
100°
105°
110°
25°
20°
15°
10°
5°
0°



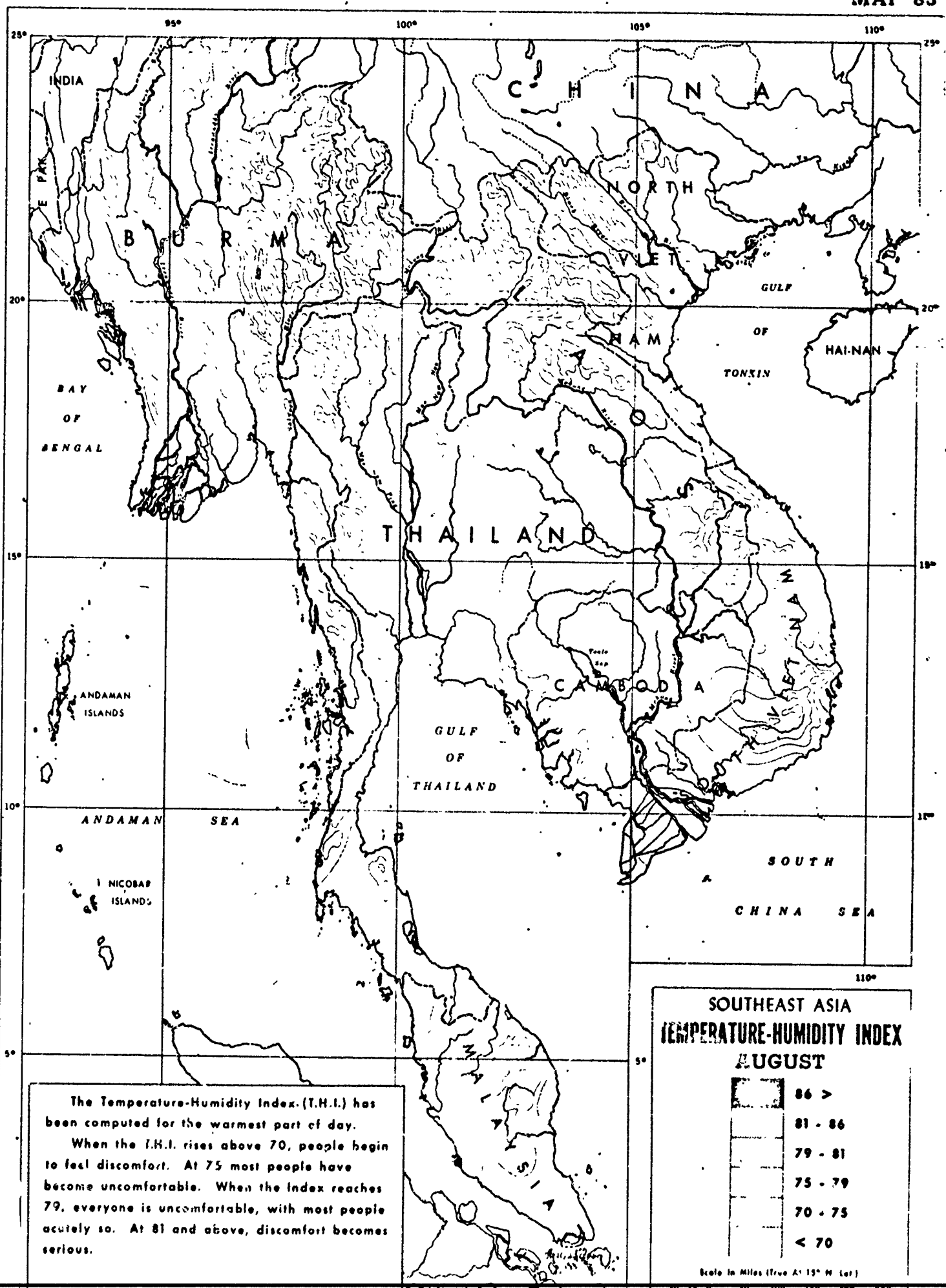
The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.

When the T.H.I. rises above 70, people begin to feel discomfort. At 75 most people have become uncomfortable. When the Index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.



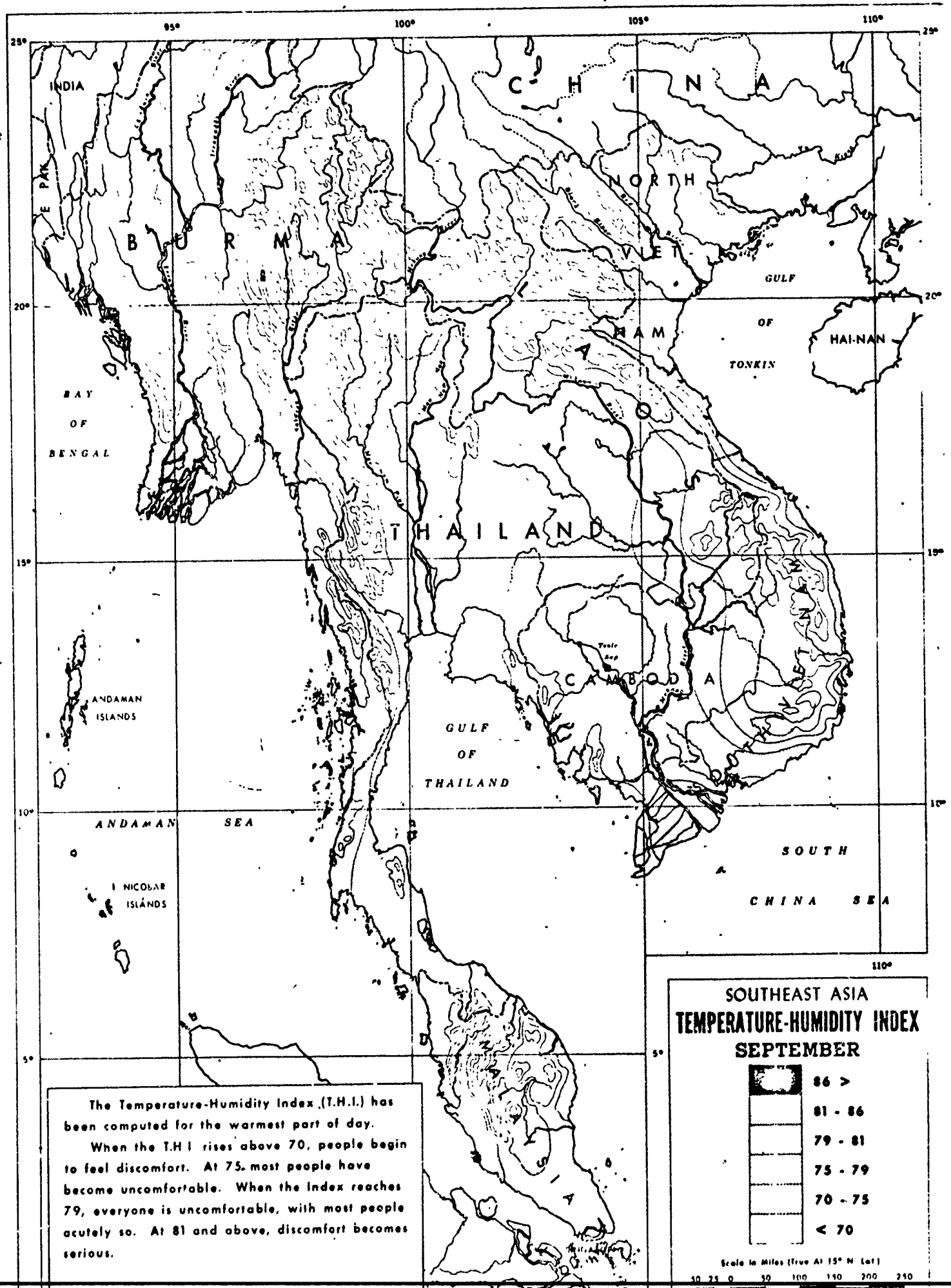
The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.

When the T.H.I. rises above 70, people begin to feel discomfort. At 75 most people have become uncomfortable. When the Index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.



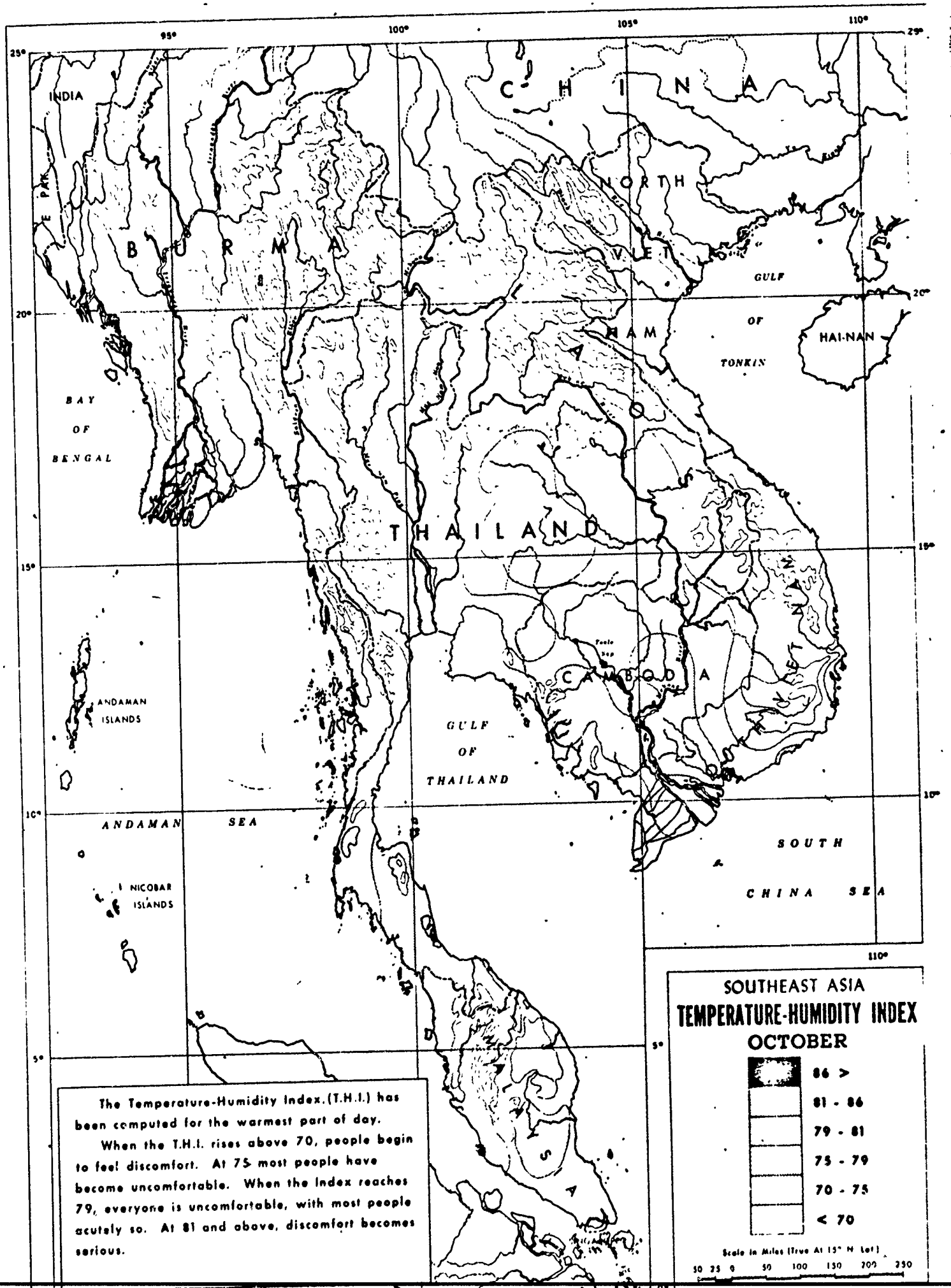
The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.

When the T.H.I. rises above 70, people begin to feel discomfort. At 75 most people have become uncomfortable. When the index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.



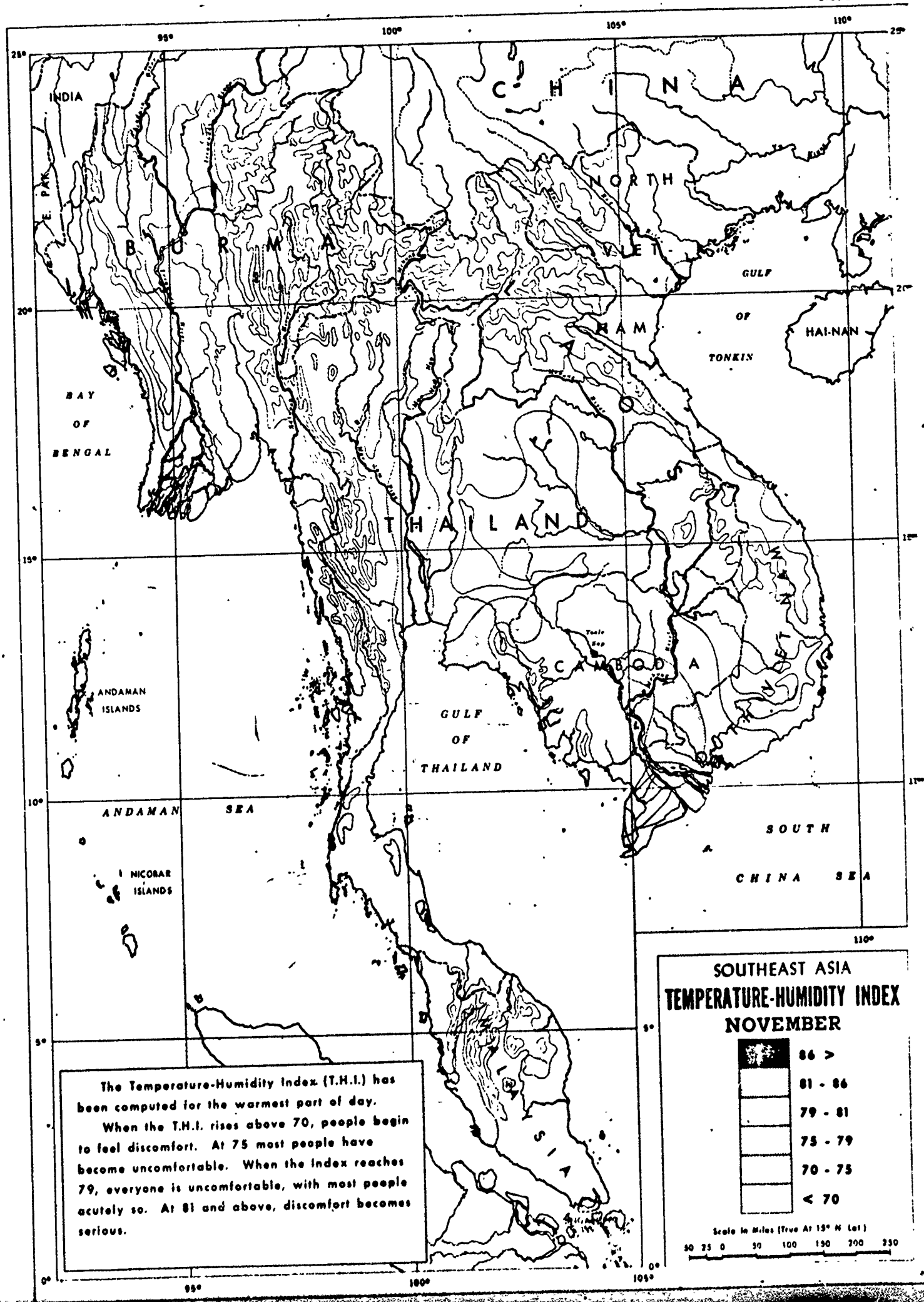
The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.

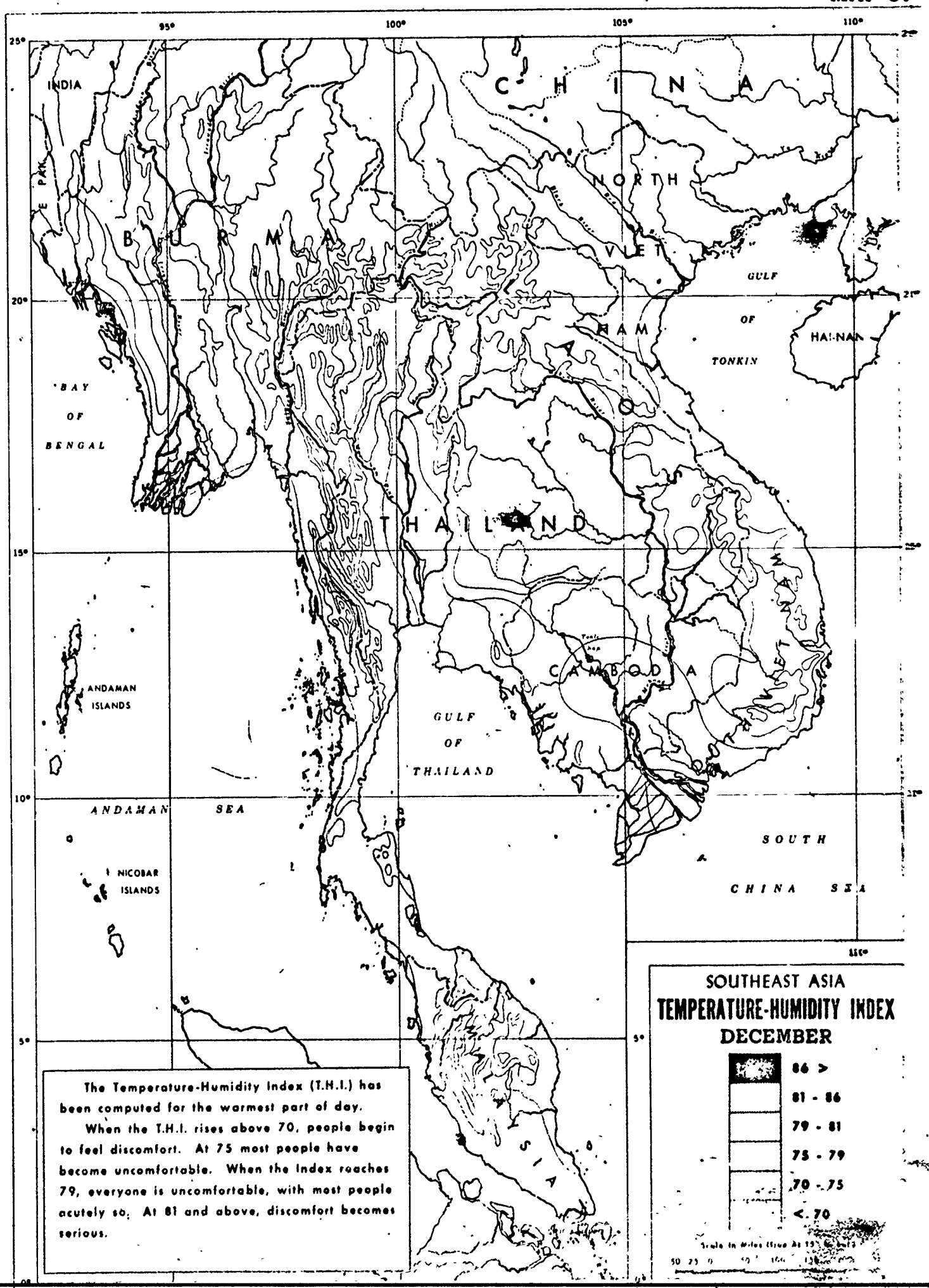
When the T.H.I. rises above 70, people begin to feel discomfort. At 75, most people have become uncomfortable. When the Index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.



The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.

When the T.H.I. rises above 70, people begin to feel discomfort. At 75 most people have become uncomfortable. When the Index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.


INDIA
CHINA
NORTH
VIET
GULF
OF
TONKIN
HAI-NAN
BURMA
LAOS
BAY
OF
BENGAL
THAILAND
CAMBODIA
ANDAMAN
ISLANDS
GULF
OF
THAILAND
ANDAMAN
SEA
NICOBAR
ISLANDS
SOUTH
CHINA
SEA
MALAYSIA
SOUTHEAST ASIA
TEMPERATURE-HUMIDITY INDEX
NOVEMBER
86 >
81 - 86
79 - 81
75 - 79
70 - 75
< 70
Scale in Miles (True At 15° N Lat)
50 25 0 50 100 150 200 250
The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.
When the T.H.I. rises above 70, people begin to feel discomfort. At 75 most people have become uncomfortable. When the index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.



The Temperature-Humidity Index (T.H.I.) has been computed for the warmest part of day.

When the T.H.I. rises above 70, people begin to feel discomfort. At 75 most people have become uncomfortable. When the index reaches 79, everyone is uncomfortable, with most people acutely so. At 81 and above, discomfort becomes serious.