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THE LOOK OF OUR LAND

AN AIRPHOTO ATLAS OF THE RURAL UNITED STATES:

The East and South

U.S. DEPARTMENT OF AGRICULTURE

ECONOMIC RESEARCH SERVICE

AGRICULTURE HANDBOOK NO. 406

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ABSTRACT

Airphotos illustrate land use patterns and terrain in five land resource regions in the Eastern and Southern United States. Portions of small-scale airphoto index sheets and a stereopair of airphotos accompany the description of each area that is reproduced from U.S. Department of Agriculture, Agriculture Handbook 296, "Land Resource Regions and Land Resource Areas of the United States."

Key Words: Land resources, Land use patterns, Airphotos, Land resource regions, Land resource areas, North Central States.

Studies in the series on The Look of Our Land—An Airphoto Atlas of the Rural United States include:

- A. Northwestern Forest, Forage, and Specialty Crop Region
- B. Northwestern Wheat and Range Region
- C. California Subtropical Fruit, Truck, and Specialty Crop Region
- D. Western Range and Irrigated Region
- E. Rocky Mountain Range and Forest Region
- F. Northern Great Plains Spring Wheat Region
- G. Western Great Plains Range and Irrigated Region
- H. Central Great Plains Winter Wheat and Range Regions
- I. Southwestern Plateaus and Plains Range and Cotton Region
- J. Southwestern Prairies Cotton and Forage Region
- K. Northern Lake States Forest and Forage Region
- L. Lake States Fruit, Truck, and Dairy Region
- M. Central Feed Grains and Livestock Region
- N. East and Central General Farming and Forest Region
- O. Mississippi Delta Cotton and Feed Grains Region
- P. South Atlantic and Gulf Slope Cash Crop, Forest, and Livestock Region
- R. Northeastern Forage and Forest Region
- S. Northern Atlantic Slope Truck, Fruit, and Poultry Region
- T. Atlantic and Gulf Coast Lowlands Forest and Truck Crop Region
- U. Florida Subtropical Fruit, Truck Crop, and Range Region

This handbook, subtitled "The East and South," includes regions N,O,P,R,S,T,and U

Washington, D.C. 20250

April 1971

The Look of Our Land— An Airphoto Atlas of the Rural United States:

THE EAST AND SOUTH

Compiled by
SIMON BAKER and
HENRY W. DILL, JR.¹

BACKGROUND

The Economic Research Service has been conducting studies on present and potential uses of land in the United States. In connection with this activity, USDA Agriculture Handbook 153 "Land Use and Its Patterns in the United States," by F. J. Marschner, was published in 1959. This landmark publication contained a color map scaled at 1 : 5,000,000, entitled "Major Land Uses in the United States." An unusual feature of the Handbook was 168 aerial photographs showing land use patterns across the 48 contiguous States. The map, text, and photos together showed the ways that our land is used. This bulletin updates Agriculture Handbook 153, which is out of print and may be found only in major libraries.

In 1965, another landmark publication appeared: "Land Resource Regions and Major Land Resource Areas of the United States," USDA Agriculture Handbook 296, for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Morris E. Austin and many others in the Soil Conservation Service compiled this classification and systematic description of U.S. resource regions. Twenty land resource regions were delineated, which were further subdivided into 156 land resource areas, with in-

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formation on land use, elevation and topography, climate, water, and soils for each.

This atlas then brings together the text of Agriculture Handbook 296 with photos to show land use and related information according to an established regional and area classification of U.S. land resources.

The airphotos in this handbook were selected to show characteristics and land use in 42 resource areas in the Eastern and Southern States. Accompanying the photos of each area is a brief description of land use, climate, soils, and topography for that area.

The ways we use our land are usually described verbally or quantitatively, or are depicted on maps. These presentations are informative but limited. There is no substitute for seeing, and an aerial view is unsurpassed for observing certain phenomena on the surface of the earth. Aerial photographs, used with maps and descriptions, provide a comprehensive idea of how land is used. Such richly detailed photos can be viewed stereoscopically for three-dimensional study of relationships between items on the earth's surface and man's activities.

USE OF THE AIRPHOTO ATLAS

Two facing pages are devoted to each land resource area. A stereopair, usually at a scale of 1: 20,000, shares each right-hand page with a description of the area that is reproduced from Agriculture Handbook 296. To locate and orient the terrain shown in the stereopair, the reader should refer to the numbers on the photo index sheet (described below) on the left-hand page. He will note that the compass orientations of the stereopairs vary, but the index sheet clarifies the orientation.

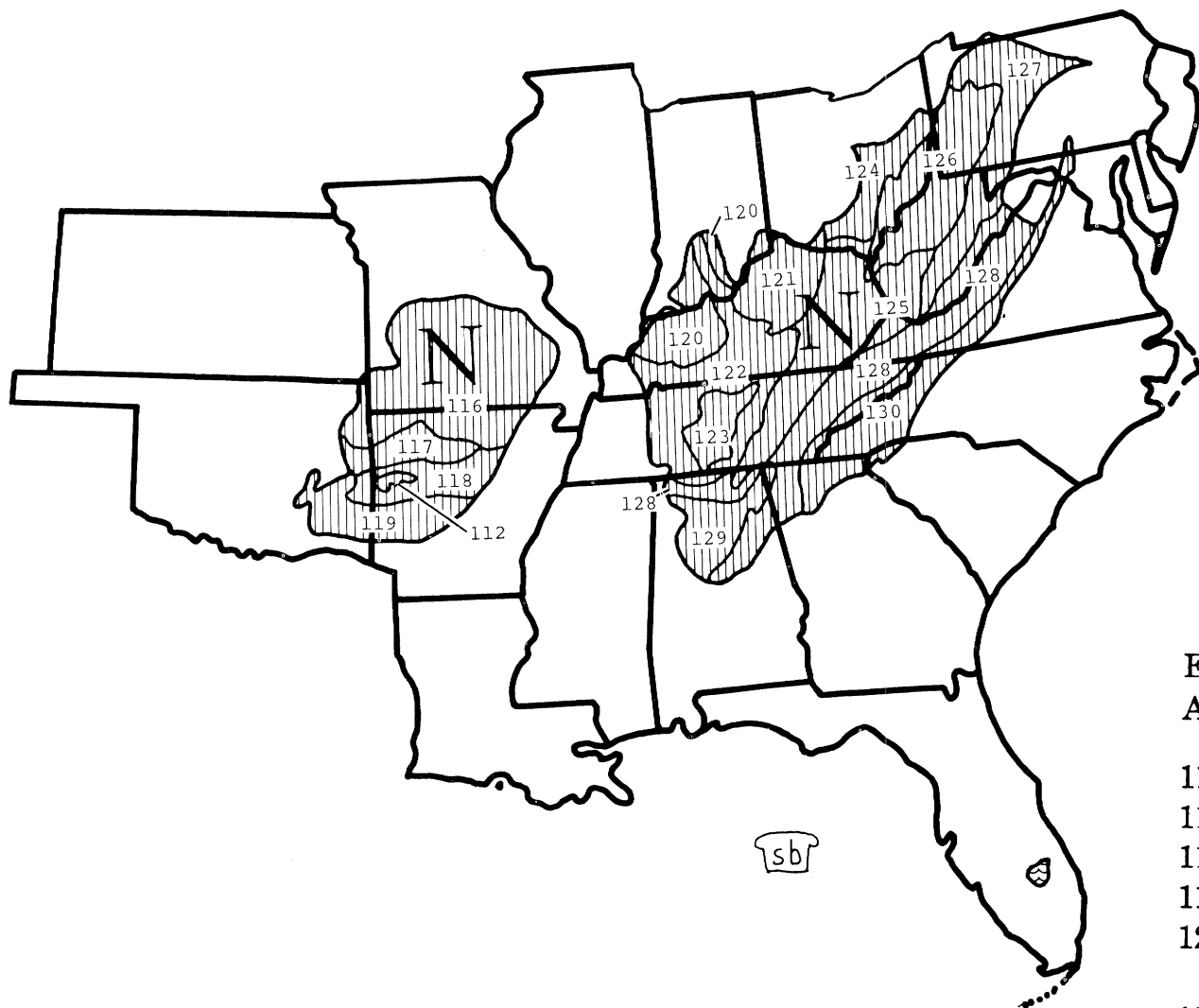
The area shown on a stereopair overlaps two points

on a flight line showing the same portion of the earth's surface. When viewed through a simple pocket stereoscope the scene appears three-dimensional. Any text on aerial photographic interpretation or photogrammetry describes how such photos are made and how to use the stereoscope.

Each left-hand page shows an aerial photographic index sheet that includes the area of the facing stereopair. Each index sheet was selected to match the land use description for the given area. An index sheet is an uncontrolled mosaic made up of many individual airphotos. The photos are assembled with their identification numbers showing, matched by eye, and mounted on a board. The group is rephotographed, reduced in scale, and printed for use as a reference for locating specific photographs. Most of the index sheets in this bulletin are reproduced at their original scale of 1: 63,360. A caution about using the index sheets: Since many individual photos were fitted together by eye, the fit is not always precise, so measurements of distance or area on index sheets are only approximate.

Each index sheet is oriented with north at the top. In some cases, flight lines of the individual photos were other than north-south, so the page must be rotated to read the number. To aid identification, the bottom label of each index sheet gives the following identification: Land resource area number, county, State, year and month of photography, index sheet number and scale, and agency for which the photography was flown. The letter "P" on the label indicates only partial coverage of the county.

Abbreviated sources shown on the photo index sheets are: ASCS, Agricultural Stabilization and Conservation Service; SCS, Soil Conservation Service; and USFS, Forest Service, of USDA.



**EAST AND CENTRAL GENERAL FARMING
AND FOREST REGION**

- 116 Ozark Highland
- 117 Boston Mountains
- 118 Arkansas Valley and Ridges
- 119 Ouachita Mountains
- 120 Kentucky and Indiana Sandstone and Shale Hills and Valleys
- 121 Kentucky Bluegrass
- 122 Highland Rim and Pennyroyal
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- 129 Sand Mountain
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N—EAST AND CENTRAL GENERAL FARMING AND FOREST REGION

236,500 square miles

This borderland region between the North and the South includes the Appalachian mountains, valleys, and dissected plateaus and the Ozarks. The annual precipitation is 40 to 50 inches over much of the region but ranges from 35 inches along the western edge to 60 inches or more on some of the higher mountains in the east. The freeze-free season is 180 to 200 days over a large part of the region but ranges from about 150 days in the north-east to as long as 240 days in some of the valleys in the south.

Sols Bruns Acides from sandstones and acid shales are the more extensive soils on the mountain slopes and dissected plateaus. Red-Yellow Podzolic soils are on limestones and more deeply weathered shales. Reddish-Brown Lateritic soils are conspicuous in some limestone valleys and basins, but their total area is small. Alluvial soils along the many streams are of small total extent, but they are cropped intensively throughout the region.

Small general farms are characteristic of much of the region, but there are large dairy and livestock farms in areas of more favorable soils. Corn, small grains, and hay are the most extensive crops. Tobacco is an important cash crop, especially in the eastern two-thirds of the region. The steeply sloping areas, amounting to nearly one-half of the region, are mainly in forests, which are used for both recreation and timber production. A large part of the Nation's coal is mined in this region.



Land Resource Area 116
Taney Co., Mo. December 1962.
Index Sheet 3 of 4. ASCS. 1: 63,360.

116—Ozark Highland

Missouri, Arkansas, and Oklahoma
34,400 square miles

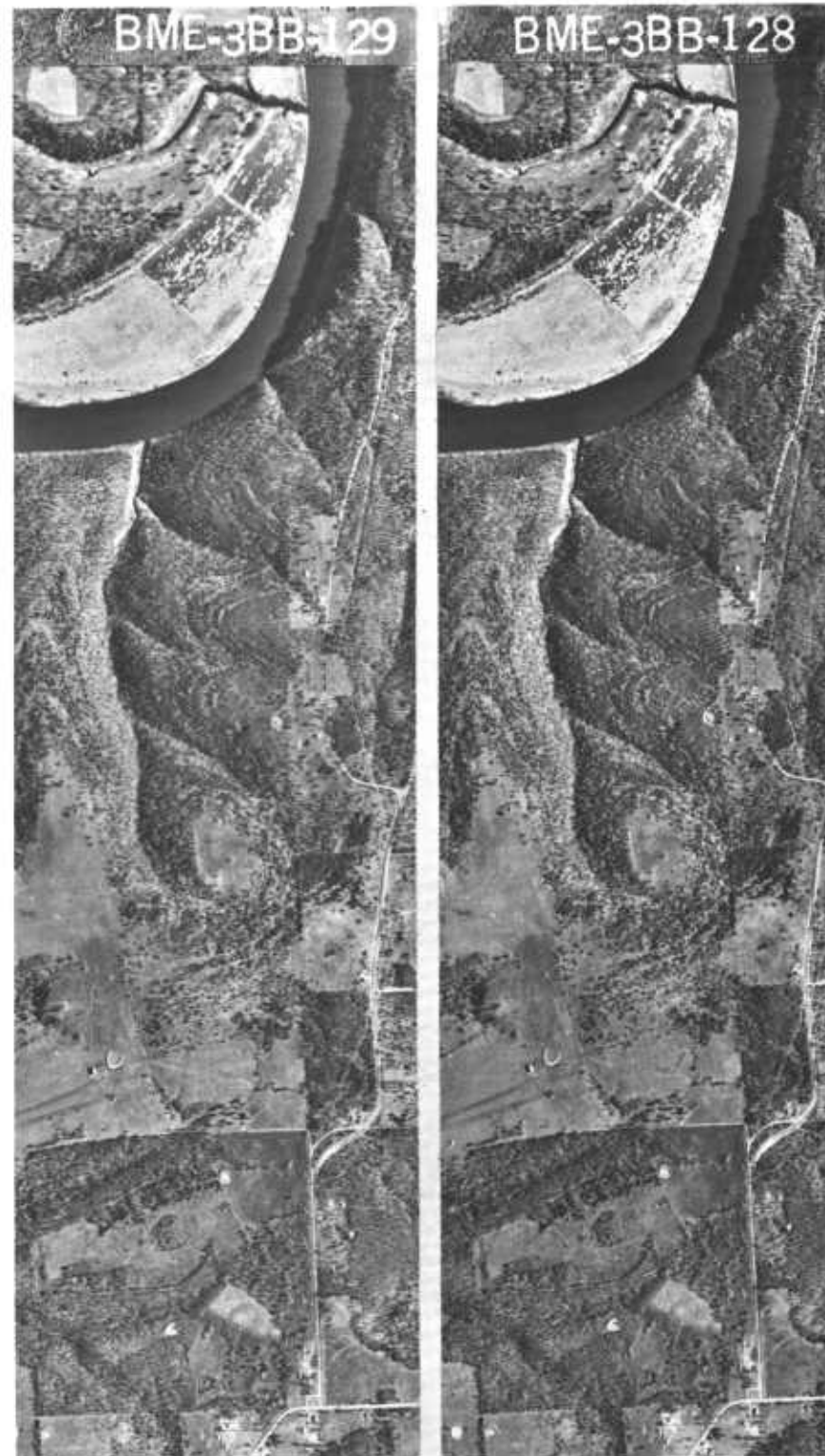
Land Use: About three-fifths of the area is in forest or woodland, most of it in farm woodlots but some in large holdings. About one-fifth of the area is cropland. Corn, feed grains, and hay for dairy cattle and other livestock are the principal crops, and orchards, vineyards, and truck crops are important on some of the more friable deep soils. Pastures, mainly of tame grasses and legumes, occupy most of the remaining one-fifth of the area.

Elevation and Topography: 500 to 1,500 feet. These sharply dissected limestone plateaus have narrow rolling ridgetops that break sharply to steep side slopes. Valleys are narrow and have steep gradients, especially in the upper reaches. There are some gently sloping plateau remnants in the west. Local relief is in several tens of feet to a few hundred feet.

Climate: *Average annual precipitation*—40 to 48 inches; highest in spring and early summer and low in midsummer. *Average annual temperature*—55° to 60° F. *Average freeze-free period*—180 to 200 days.

Water: Crops and pasture depend upon the moderate rainfall. Shallow wells or springs supply domestic needs and water for livestock on most farms, but deep wells are required to obtain large supplies. Water from deep wells is of good quality but hard. Small ponds on many individual farms provide some water for livestock, and a few large reservoirs are used for flood control and recreation.

Soil: *Red-Yellow Podzolic soils* (Baxter, Clarksville, Nixa, and Dickson, the latter two with fragipans) from deeply weathered cherty limestone occupy much of the area. Other members of this group are Talbott and Colbert soils from clayey limestones. *Reddish-Brown Lateritic soils* (Decatur) from relatively pure limestones and *Rendzinas* (Gasconade) from shaly limestones or calcareous clays are soils that are locally conspicuous but of small total extent. Small areas of soils like *Brunizems* are in small prairie outliers in the west.





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Land Resource Area 117
Madison Co., Ark. October 1965.
Index Sheet 3 of 4. ASCS. 1: 63,360.

117—Boston Mountains

Arkansas and Oklahoma
6,200 square miles

Land Use: About three-fourths of the area is in forest, mainly in farm woodlots but some in Arkansas in national forests. The remaining one-fourth of the area is about evenly divided between cropland and pasture. Corn, other grains, and hay for livestock feed are the main crops, and peach and apple orchards are important locally. Pastures are mostly of tame grasses and legumes but of native grasses on the prairie outliers in the west.

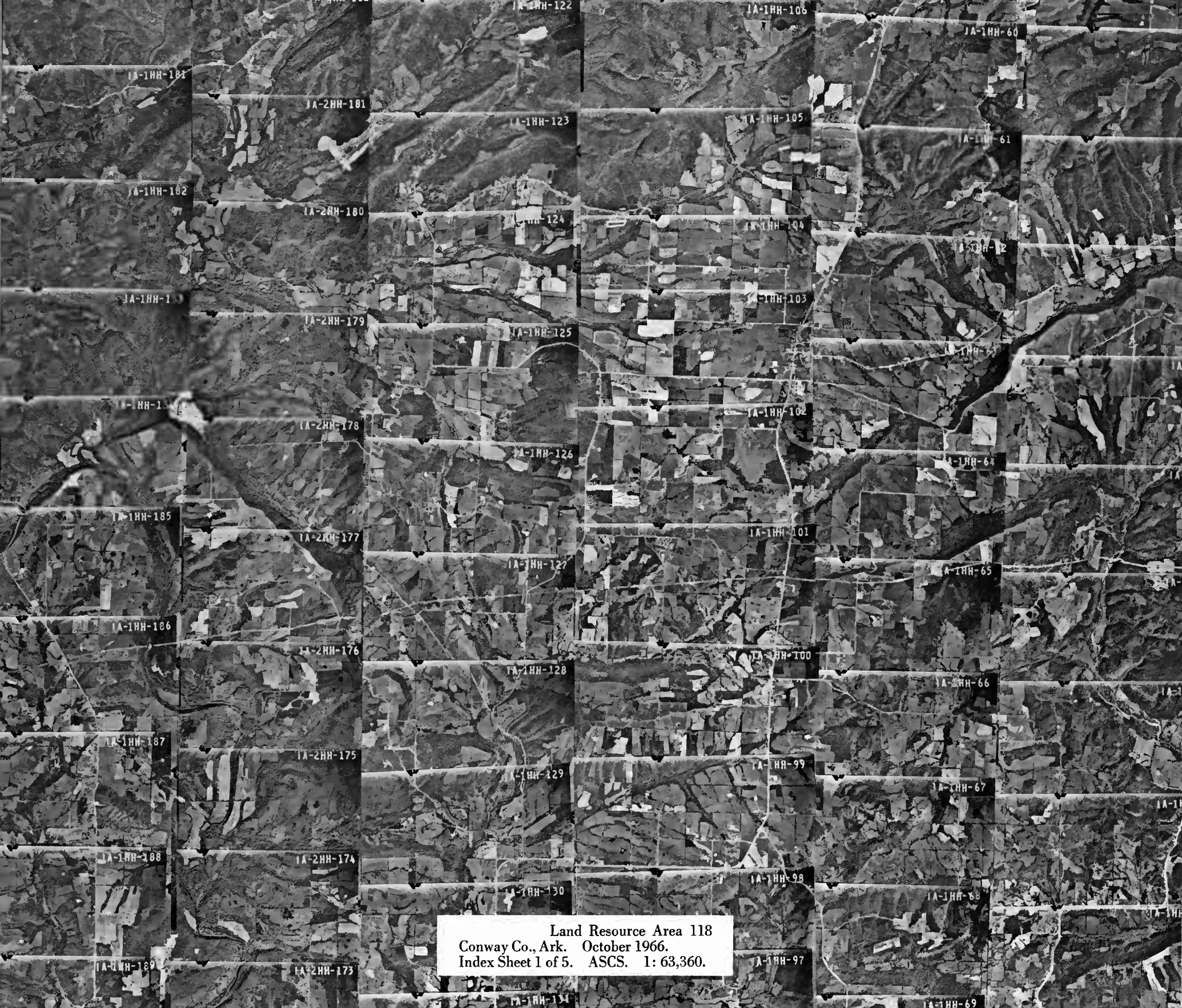
Elevation and Topography: 500 feet on the lowest valley floors to 2,500 feet on the highest ridge crests. Ridgetops of these deeply dissected sandstone and shale plateaus are narrow and rolling; valleys are narrow and steep sided and have steep gradients. Local relief is in a few hundreds of feet.

Climate: *Average annual precipitation*—45 to 52 inches; highest in spring and fall and lowest in mid-summer. *Average annual temperature*—55° to 60° F. *Average freeze-free period*—180 to 205 days.

Water: The moderately high rainfall is adequate for crops and pastures. Shallow wells are the principal source of water for domestic use and livestock in the uplands. Small ponds on individual farms provide some water for livestock, and springs are numerous in the valleys. Deep wells are needed to obtain large supplies of ground water. Large reservoirs on several of the major streams are a source of municipal water and also provide flood control and recreation.

Soil: *Lithosols* (Montevallo, Ramsey, and Hector) and rough stony land on hilly to steep slopes are dominant in much of the area. *Red-Yellow Podzolic soils* (Hartsells, Linker, Allen, and Jefferson) are on the less sloping ridgetops, benches, and foot slopes; *Planosols* (Johnsburg and Tyler) on some flats with restricted drainage; and *Reddish Prairie soils* on prairie outliers in the west.





Land Resource Area 118
Conway Co., Ark. October 1966.
Index Sheet 1 of 5. ASCS. 1: 63,360.

118—Arkansas Valley and Ridges

Arkansas and Oklahoma
7,000 square miles

Land Use: About one-half of the area is in forest; about one-third of the wooded area is Federally owned and most of the remainder is in farm woodlots. The other half of the area is one-third cropland and two-thirds pasture. Most of the cropland is on the less sloping land in the valleys but some is on flat mountain tops. Corn, cotton, soybeans, other feed grains, and hay are the major crops. Fruits and vegetables are important locally on the deeper soils throughout the area. Pastures are on the bottom land of small streams and throughout cleared parts of the uplands; they consist of mixtures of tame and native grasses and legumes.

Elevation and Topography: 300 feet on the lowest valley floors to 2,800 feet on some mountain tops. These ridges and valleys are underlain by slightly folded to level beds of sandstones and shales. Ridge slopes are steep; most crests are narrow and rolling but some are broad and flat. The intervening valleys are broad and smooth. Local relief is in several tens of feet in valleys and on the flat ridgetops. The ridges and mountains rise sharply hundreds of feet above adjacent valleys.

Climate: *Average annual precipitation*—44 to 50 inches; highest in spring and autumn. *Average annual temperature*—60° to 63° F. *Average freeze-free period*—200 to 240 days.

Water: The moderate rainfall is generally adequate for crops and pasture. In the uplands, water for domestic use is obtained mainly from shallow wells and water for livestock from small ponds on individual farms. In the valleys, springs, shallow wells, small ponds, and perennial streams provide water for most uses. Deep wells yield large amounts of hard water except in areas of shale bedrock where ground water is scarce.

Soil: *Lithosols* (Hector, Ramsey, and Montevallo) are dominant on hilly to steep ridges. *Red-Yellow Podzolic soils* (Linker, Hartsells, Enders, Monongahela, and Waynesboro) are extensive on level to rolling uplands and terraces. *Planosols* (Johnsburg and Wrightsville) are on level to gently rolling uplands and in clayey old alluvial deposits. *Alluvial soils* (Pope, Philo, and Stendal) on flood plains occupy about 10 percent of the area and are among the more important soils for crops.





Land Resource Area 119
Hot Spring Co., Ark. December 1965.
Index Sheet 2 of 4. ASCS. 1: 63,360.

119—Ouachita Mountains

Arkansas and Oklahoma
11,700 square miles

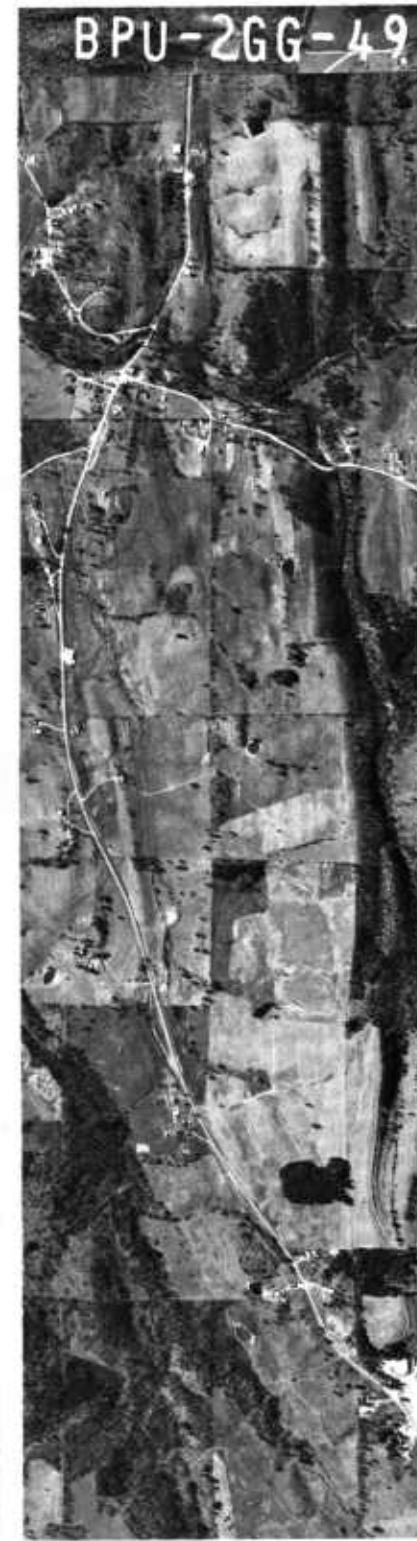
Land Use: Slightly more than four-fifths of the area is forested. Of this about one-fourth, mainly in Arkansas, is Federally owned. Some of the remainder is in large holdings, but much of it is in farm woodlots. Lumbering, wood-using industries, and recreational uses are important throughout the area. About 15 percent of the area is cropped or in pasture; the pasture acreage is a little larger than cropland acreage. Corn, oats, other feed grains, and hay for livestock feed are the main crops. Pastures are largely mixtures of tame grasses and legumes except on some small prairie outliers in the west where pastures are in native grasses.

Elevation and Topography: 300 feet on the lowest valley floors to 2,700 feet on the highest mountain peaks. These steep mountains are underlain by folded and faulted shales, slates, quartzites, sandstones, and novaculite. Most of the stream valleys are narrow and have steep gradients, but wide terraces and flood plains border the Ouachita River in western Arkansas. Local relief is a few hundred feet to more than 1,000 feet.

Climate: *Average annual precipitation*—Mainly 48 to 56 inches, decreasing to 35 inches along the western edge; fairly evenly distributed through the year but higher in spring and early autumn. *Average annual temperature*—60° to 62° F. *Average freeze-free period*—200 to 240 days.

Water: The high rainfall and many perennial streams provide abundant water. Several large reservoirs for water storage and flood control are used also for recreation. In the valleys spring and shallow wells are the main sources of water for domestic use and for livestock.

Soil: *Lithosols* (Goldston, Hector, Ramsey, and Montevallo) and rough stony land occupy most of the steep slopes throughout the area. *Red-Yellow Podzolic soils* (Georgeville, Herndon, Enders, and Wickham) are on the gentle slopes of ridgetops, benches, foot slopes, and old stream terraces and *Planosols* (Conway) on the gentle slopes of valleys underlain by shale. *Alluvial soils* (Congaree, Chewacla, and Pope) are on flood plains in some of the broader valleys and are among the most important agricultural soils.





Land Resource Area 120
Muhlenberg Co., Ky. July 1965.
Index Sheet 4 of 4. ASCS. 1: 63,360.

120—Kentucky and Indiana Sandstone and Shale Hills and Valleys

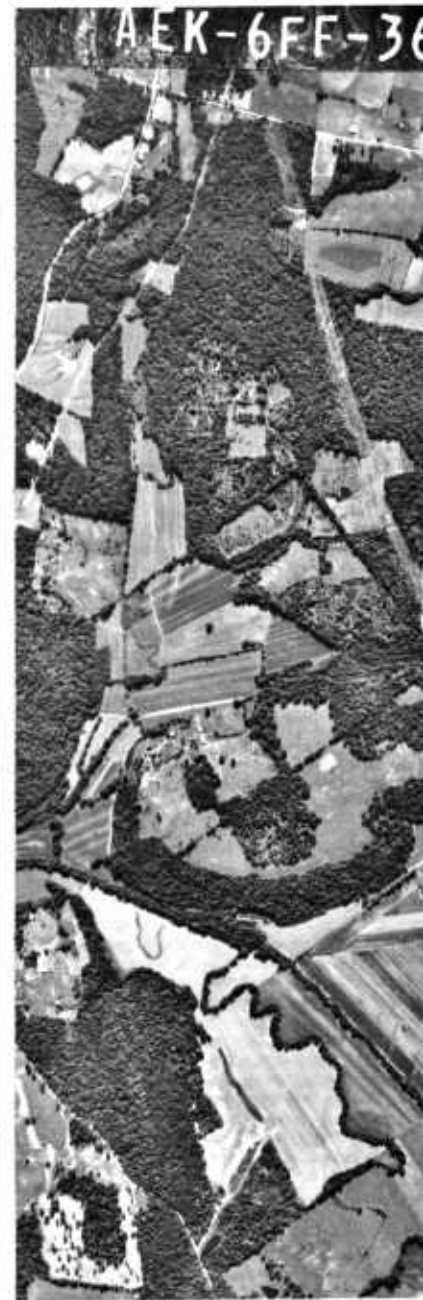
Kentucky and Indiana
11,200 square miles

Land Use: Nearly all the area is in farms but about 5 percent is urban or in other uses. Strip mining for coal is an important industry. Slightly more than one-third of the area as a whole is cropland but the proportion is much higher in western Kentucky than elsewhere. Corn, soybeans, other feed grains, and hay for dairy cattle and other livestock are the principal crops. Tobacco is a major cash crop in places and apple and peach orchards are important on some farms, but the total acreage in these crops is small. About one-sixth of the area is in permanent pasture of tame and native grasses. About one-third is in forest, almost all in small and medium-sized farm woodlots.

Elevation and Topography: 400 feet on the lowest valley floors to about 800 feet on the highest ridgetops. The smoother parts of the gently rolling to hilly dissected sandstone and shale plateau have a thin to moderately thick loess cap. Valleys of the small streams are narrow, but the larger tributaries of the Ohio and Mississippi Rivers have wide flood plains. Local relief is mainly 100 to 200 feet, but some of the deeper valleys are several hundred feet below adjacent ridgetops. Strip mines, both operating and abandoned, are conspicuous features in many parts of the area.

Climate: Average annual precipitation—40 to 48 inches; fairly evenly distributed but slightly higher in spring and early summer and lowest from mid-summer through autumn. Average annual temperature—55° to 58° F. Average freeze-free period—180 to 195 days.

Water: Rainfall is adequate for crops in most years but yields are reduced by drought in some years. Shallow wells provide water for domestic and livestock use on most farms but supplies are limited. Small farm ponds are an important source of livestock water. Deep wells yield large amounts of water, but the water is usually highly mineralized. The many perennial streams are potential water sources but they are not much used at present.



Soil: *Gray-Brown Podzolic soils* (Loring, Hosmer, and Grenada) from a thin to a moderately thick loess mantle over residuum from acid sandstones and shales are the dominant soils on the smooth flats and low hills in the northwest. In more dissected areas *Red-Yellow Podzolic soils* (Zanesville, Tilsit, and Christian) occupy level to rolling ridgetops; Zanesville and Tilsit soils have strongly expressed fragipans

and some features of *Gray-Brown Podzolic soils*. On ridge slopes *Sols Bruns Acides* (Muskingum and Dekalb) and thin *Red-Yellow Podzolic soils* (Litz) are most extensive but rough stony land and strip-mine spoil are conspicuous in many places. *Alluvial soils* (Wakeland, Sharon, Falaya, and Huntington) are on broad flood plains, especially in western Kentucky, and are highly important to agriculture.



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Land Resource Area 121
Bourbon Co., Ky. June 1966.
Index Sheet 3 of 4. ASCS. 1: 63,360.

AFI-366-171

121—Kentucky Bluegrass

Kentucky, Indiana, and Ohio
11,000 square miles

Land Use: Most of the area is in farms but slightly less than one-third is cropland. Corn, other feed grains, and hay for livestock occupy the most acreage, but tobacco is an important cash crop in most of the area. About two-fifths of the area is in pasture, mainly bluegrass although some other tame grasses are also grown. Beef cattle are the principal livestock and race horses and sheep are important locally. About one-sixth of the area is in farm woodlots in poor condition. The remainder is in urban and miscellaneous uses.

Elevation and Topography: 800 to 900 feet in the central part and from 500 feet on valley floors to as much as 1,000 feet on the highest ridgetops in the shale and limestone hills. An undulating to rolling central limestone plain is surrounded by shale and limestone hills having narrow tops and steep sides. In the central part, local relief is mainly in a few feet to a few tens of feet. In the surrounding hills, relief is commonly 100 to 200 feet and in places as much as 500 feet.

Climate: *Average annual precipitation*—About 45 inches; highest in early spring, gradually decreasing through summer and autumn. *Average annual temperature*—About 55°F. *Average freeze-free period*—180 to 190 days.

Water: The moderate rainfall is adequate for crops in normal years, but yields are reduced by drought in some years. Cisterns and springs are important sources of water for domestic and livestock use. In some places deep wells supply large amounts of highly mineralized water. Recently small farm ponds have become an important source of water for livestock and other farm uses. A few large streams are potential sources of water but are not much used at present.

Soil: *Gray-Brown Podzolic soils* (Lowell, Shelbyville, Switzerland, Eden, Nicholson, Salvisa, and Hampshire) on rolling to hilly uplands underlain by calcareous rocks are the dominant soils. *Reddish-Brown Lateritic soils* (Maury) are important in deeply weathered phosphatic limestones. *Rendzinas* (Fairmont and Otway) are conspicuous on steep slopes underlain by soft limestone or highly calcareous shales.





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AKC-1DD-133

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Land Resource Area 122
Lawrence Co., Tenn. May 1963.
Index Sheet 3 of 4. ASCS. 1: 63,360.

122—Highland Rim and Pennyroyal

Kentucky, Tennessee, Indiana, and Alabama
22,700 square miles

Land Use: Most of the area is in farms; about 5 percent is Federally owned, and a small part is urban or in miscellaneous uses. About two-fifths is cropland. Corn, other feed grains, and hay for livestock feed occupy the largest acreage. Tobacco is an important cash crop and small acreages are used to grow vegetables and fruit, largely for home consumption. About one-sixth is in pasture of tame and native grasses and legumes. About one-third is in forest, mainly in farm woodlots but in large commercial holdings on the steeper land.

Elevation and Topography: 350 feet on valley floors to about 1,000 feet on the highest ridgetops. This is a dissected limestone plateau. There are some smooth sections in the central and eastern parts, but much of the area, particularly in the west, consists of narrow rolling ridgetops, hilly and steep ridge slopes, and narrow valleys. The smooth parts have relief of only a few feet to one or two tens of feet, but the dissected areas have relief of one to several hundred feet.

Climate: *Average annual precipitation*—45 to 54 inches; highest in midwinter and early spring, gradually decreasing from spring to midautumn. *Average annual temperature*—55° to 60° F. *Average freeze-free period*—180 to 200 days.

Water: Rainfall is adequate for crops in many years, but yields are reduced in the occasional years of drought. Shallow wells, streams, and springs are the principal sources of water for livestock and domestic use in the more dissected parts, and ponds and cisterns are important sources in the smoother uplands. Wells supply an abundance of highly mineralized ground water. Multipurpose dams on the Tennessee and Cumberland Rivers provide flood control and electric power. The reservoirs also serve as waterways for transportation and recreation.

Soil: *Red-Yellow Podzolic soils* are dominant throughout the area. In thin loess mantled residuum from limestone Pembroke, Crider, Mountview, Russellville, Dickson, and Bedford (the latter three having fragipans) are representative soils. On rolling to hilly slopes Baxter and Frankstown soils from cherty limestone residuum and Christian soils from mixed sandstone, limestone, and shale are the major soils. *Regosols* (Bodine) from very cherty limestone and *Lithosols* (Montevallo and Colyer) from acid shales, mostly along the northern and eastern border, are the principal soils on steep slopes. *Alluvial soils* (Ennis, Lindsie, and Huntington) are of small total extent but are among the most important agricultural soils, especially in the more dissected parts of the area.





Land Resource Area 123
Marshall Co., Tenn. October 1963.
Index Sheet 1 of 3. ASCS. 1: 63,360.

123—Nashville Basin

Tennessee
5,700 square miles

Land Use: Nearly all the area is in farms and about two-fifths is cropland. Grain and hay for livestock are the principal crops. Beef cattle are the major livestock, but dairying is important near the larger towns and cities. About one-third of the area is in pasture of tame grasses and legumes. About one-fourth is in forest, nearly all in farm woodlots.

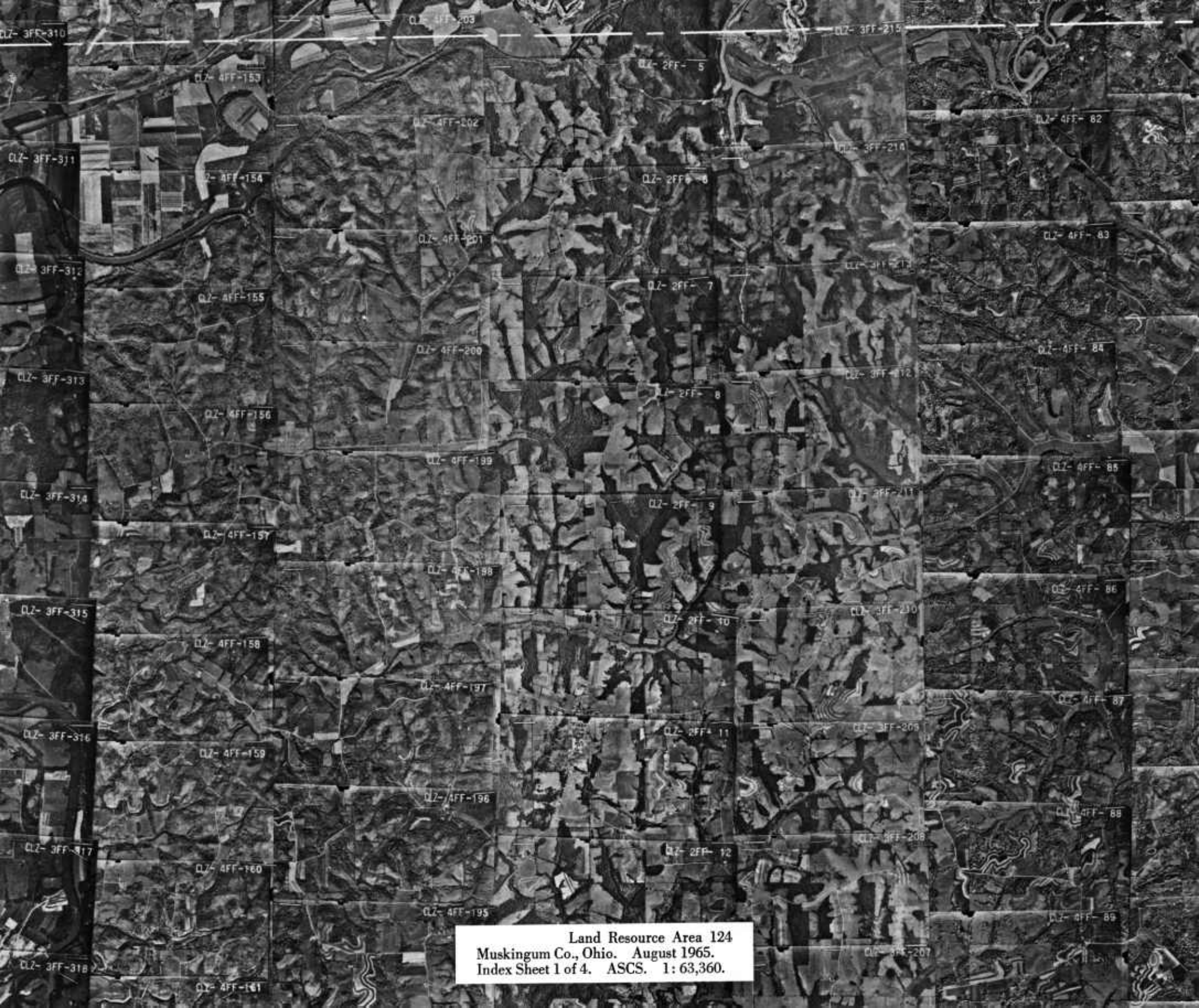
Elevation and Topography: 400 feet on valley floors to 1,000 feet in the hills. The central part of the area is a gently rolling to hilly limestone plain, but the outer margins are deeply dissected and have steep slopes. In the central part relief is in a few tens of feet to about 100 feet.

Climate: *Average annual precipitation*—About 50 inches; highest in midwinter, decreasing from mid-spring to midautumn. *Average annual temperature*—58° to 60° F. *Average freeze-free period*—180 to 200 days.

Water: The moderately high rainfall provides water for crops and pasture, but frequent summer droughts damage pastures and lower crop yields. Ground water from springs and wells is the main source of water for domestic and livestock use. Yields from wells vary and the water is highly mineralized. Farm ponds provide water for livestock in many places. The small streams fluctuate in flow and many of them are dry in summer. A few large perennial streams are important water sources, and the Cumberland River has dams for flood control, power production, and navigation.

Soil: *Reddish-Brown Lateritic soils* (Maury and Decatur) and associated *Red-Yellow Podzolic soils* (Talbot, Pembroke, and Colbert) all from limestone materials are extensive. Many of the soils in this area have somewhat darker colored surface layers than are considered normal for these great soil groups. Associated with them are *Lithosols* (Inman) and large areas of limestone rockland. *Gray-Brown Podzolic soils* (Mimosa, Armour, and Dellrose) from phosphatic and argillaceous limestone are extensive on the dissected outer borders of the area. *Alluvial soils* (Lindside and Huntington) on flood plains are of small total extent but are highly important to agriculture.





Land Resource Area 124
Muskingum Co., Ohio. August 1965.
Index Sheet 1 of 4. ASCS. 1:63,360.

124—Western Allegheny Plateau

Ohio

8,200 square miles

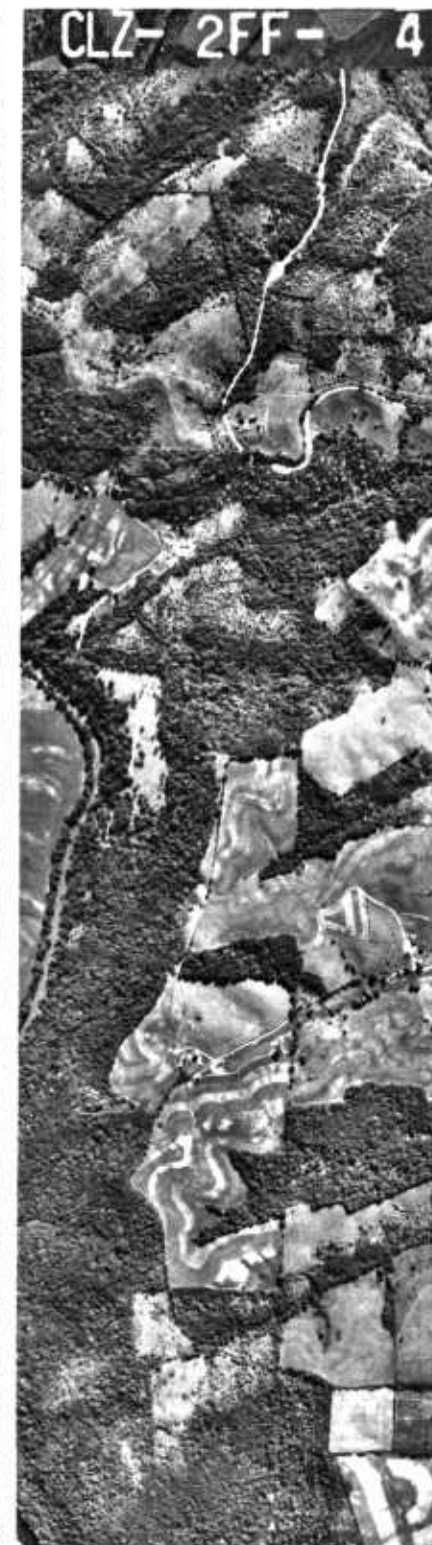
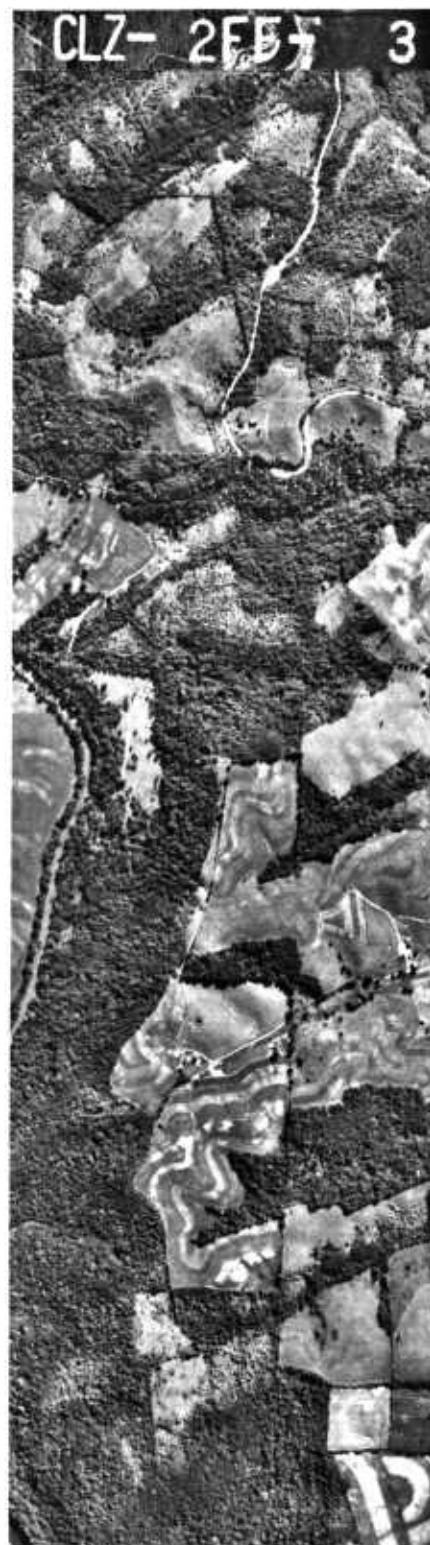
Land Use: Most of the area is in farms but about one-fourth is in other uses. About one-fifth is cropland. Hay and feed grains for livestock are the principal crops, and fruits and vegetables are important locally. About one-fifth is in pasture and tame grasses and legumes. Two-fifths is in forest, about half of which is in farm woodlots and about half in State and National forests and large commercial holdings. Strip mining of coal is important in the north, but only a small part of the total area is in this use.

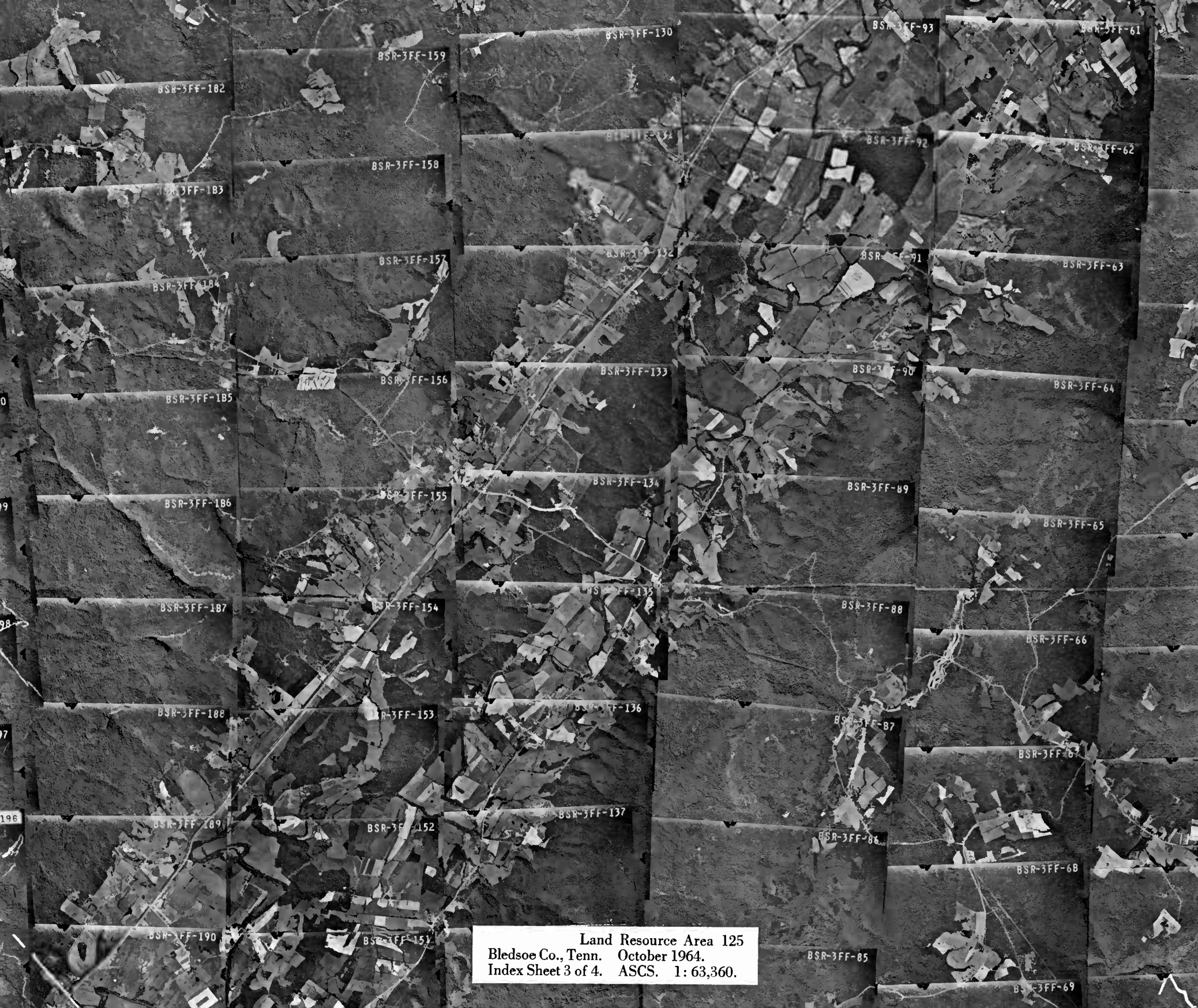
Elevation and Topography: 650 feet on the lowest valley floors to 1,300 feet at the highest ridgetops. The dissected sandstone plateau has narrow level valley floors, rolling ridgetops, and hilly to steep ridge slopes. Local relief is one to several hundred feet.

Climate: *Average annual precipitation*—40 to 45 inches; evenly distributed except for a slight maximum in late spring and a minimum in late autumn. *Average annual temperature*—48° to 55° F. *Average freeze-free period*—Mainly 140 to 160 days but 180 days along the southern edge.

Water: The moderate rainfall and many perennial streams supply an abundance of water. Shallow wells and springs are the principal water sources for domestic and livestock use. Deep ground water is abundant but is highly mineralized. Reservoirs on many streams provide water for industrial and municipal use for most of the cities within the area and also for some cities in adjoining areas.

Soil: *Gray-Brown Podzolic soils* (Gilpin, Hanover, Keene, and Wellston) are the principal soils on rolling ridgetops and *Sols Bruns Acides* (Muskingum) on the somewhat less extensive strongly rolling to steep slopes. *Alluvial soils* (Chagrin and Lobdell) on narrow flood plains are of small total extent but are the best agricultural soils of the area.





Land Resource Area 125
Bledsoe Co., Tenn. October 1964.
Index Sheet 3 of 4. ASCS. 1: 63,360.

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BSR-3FF-159
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BSR-3FF-131
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BSR-3FF-86
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BSR-3FF-190
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BSR-3FF-138
BSR-3FF-85
BSR-3FF-69

125—Cumberland Plateau and Mountains

Kentucky, Tennessee, and West Virginia
25,900 square miles

Land Use: Almost all the forest, which covers about four-fifths of the area, is privately owned, mainly in small individual holdings but partly in large tracts owned by mining and timber companies. A small part is in Cumberland National Forest. Coal mining, both strip mining and shaft mining, is the major industry in the area. About 5 percent of the area is cropland and a slightly smaller amount is in pasture. Most of the farmland is on the undulating to rolling plateau top but there is a little in the narrow valleys. Corn, other grains, and hay for livestock feed are the principal crops; many vegetables and fruits are grown for home use. Tobacco is an important cash crop on many farms, mainly in Kentucky. Commercial potato and vegetable production is locally important in Tennessee. Most farms are part-time enterprises, and the operators obtain much of their livelihood from off-farm employment.

Elevation and Topography: 1,000 feet at the base of escarpments that border the plateau to 2,000 feet on the plateau top, some mountains along the eastern margin 2,500 feet and a few 3,500 feet. The deeply dissected sandstone and shale plateau has steep and very steep slopes separated by narrow level valleys; ridgetops are narrow and rolling. In the south there are some flat plateau remnants and some mountain ranges that rise above the general plateau level. Local relief is mostly in several hundreds of feet and in places more than a thousand feet. Broader plateau remnants in the south have relief of only a few tens of feet to 100 or 200 feet.

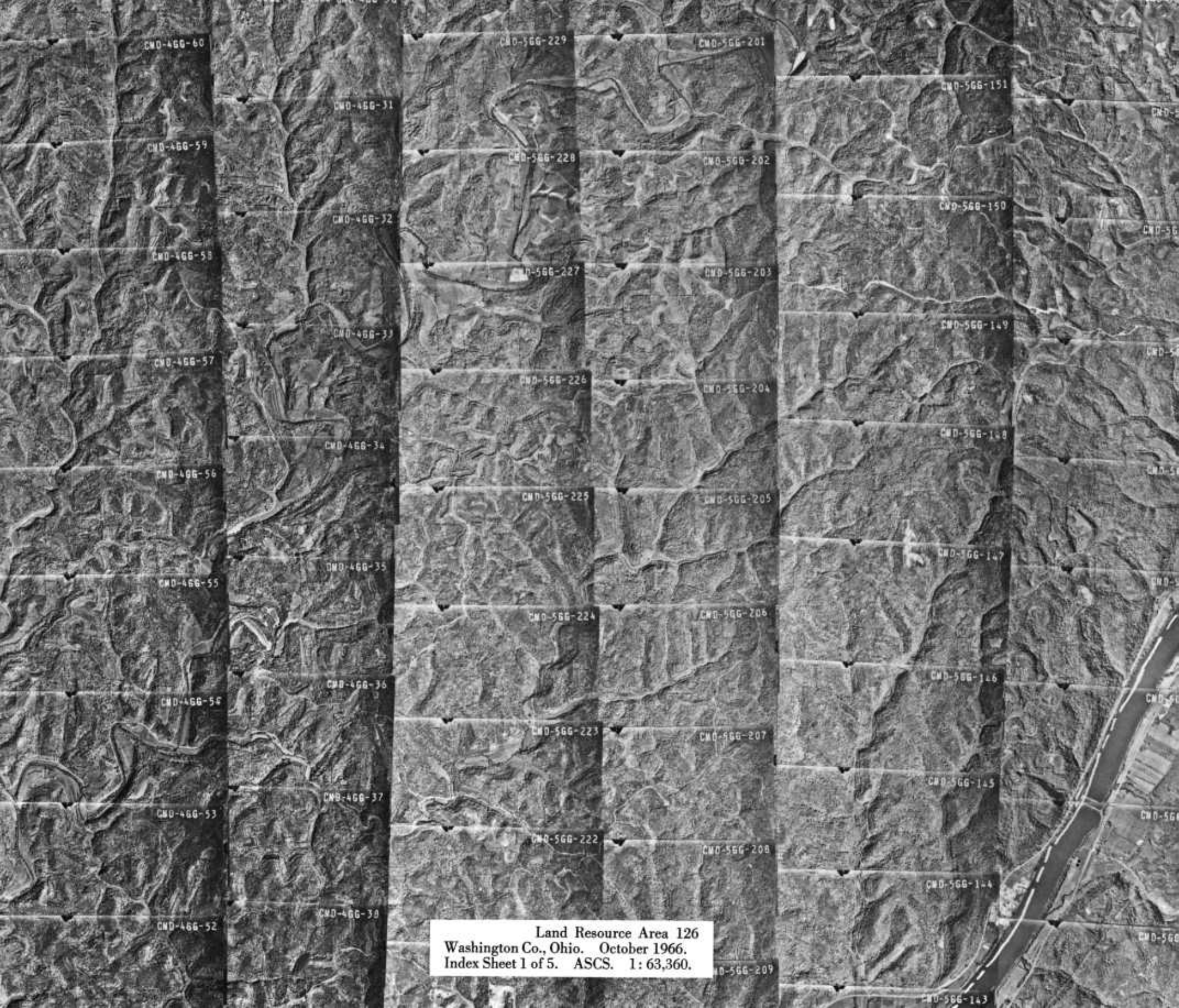
Climate: *Average annual precipitation*—42 to 56 inches, increasing from north to south; highest in winter and early spring and lowest in autumn. *Average annual temperature*—55° to 60° F. *Average freeze-free period*—170 to 200 days, increasing from north to south.

Water: Water is abundant in the area. Water for domestic and livestock use is obtained from wells, springs, and cisterns. Deep ground water is generally highly mineralized. The large perennial streams are potential water sources that are not much used at present, but a few reservoirs provide water for municipal and industrial use. The small streams flow intermittently, and most of them are dry during summer and autumn.

Soil: *Sols Bruns Acides* (Muskingum and Dekalb) and *Lithosols* (Ramsey, Weikert, and Montevallo) are the principal soils on hilly and steep slopes throughout the area. Closely associated with them are many small areas of rough stony land and rock outcrop. *Gray-Brown Podzolic soils* (Willston and Gilpin) are on the undulating and rolling plateau slopes in the north and

Red-Yellow Podzolic soils (Hartsells, Clymer, and Jefferson) on smooth plateau tops and on foot slopes in valleys, mostly in the south. The total area of these soils is not large, but they are important to agriculture. *Alluvial soils* (Pope and Philo) on flood plains in narrow valleys are other important agricultural soils.





Land Resource Area 126
Washington Co., Ohio. October 1966.
Index Sheet 1 of 5. ASCS. 1: 63,360.

126—Central Allegheny Plateau

West Virginia, Pennsylvania, and Ohio
19,400 square miles

Land Use: Most of the area is in farms; about 10 percent is urban or in other uses. Recently much farmland along the Ohio River has been diverted to industrial uses. About one-sixth of the area is cropland and about one-fifth is in pasture. Hay and some grain for dairy cattle and other livestock are the major crops, but locally many fruits and vegetables are grown in small areas for home consumption. Nearly half the area is in forest, and the sale of timber is an important source of income on some farms. Leasing land for strip mining of coal is another important source of income for many farm owners.

Elevation and Topography: 600 feet on the lowest valley floors to 1,300 feet at the highest ridgetops and higher in many places in the southeast. The dissected plateau is underlain by sandstones and shales and some layers of calcareous rocks. Level narrow valleys and narrow rolling ridgetops are separated by long steep ridge slopes. Local relief is in hundreds of feet.

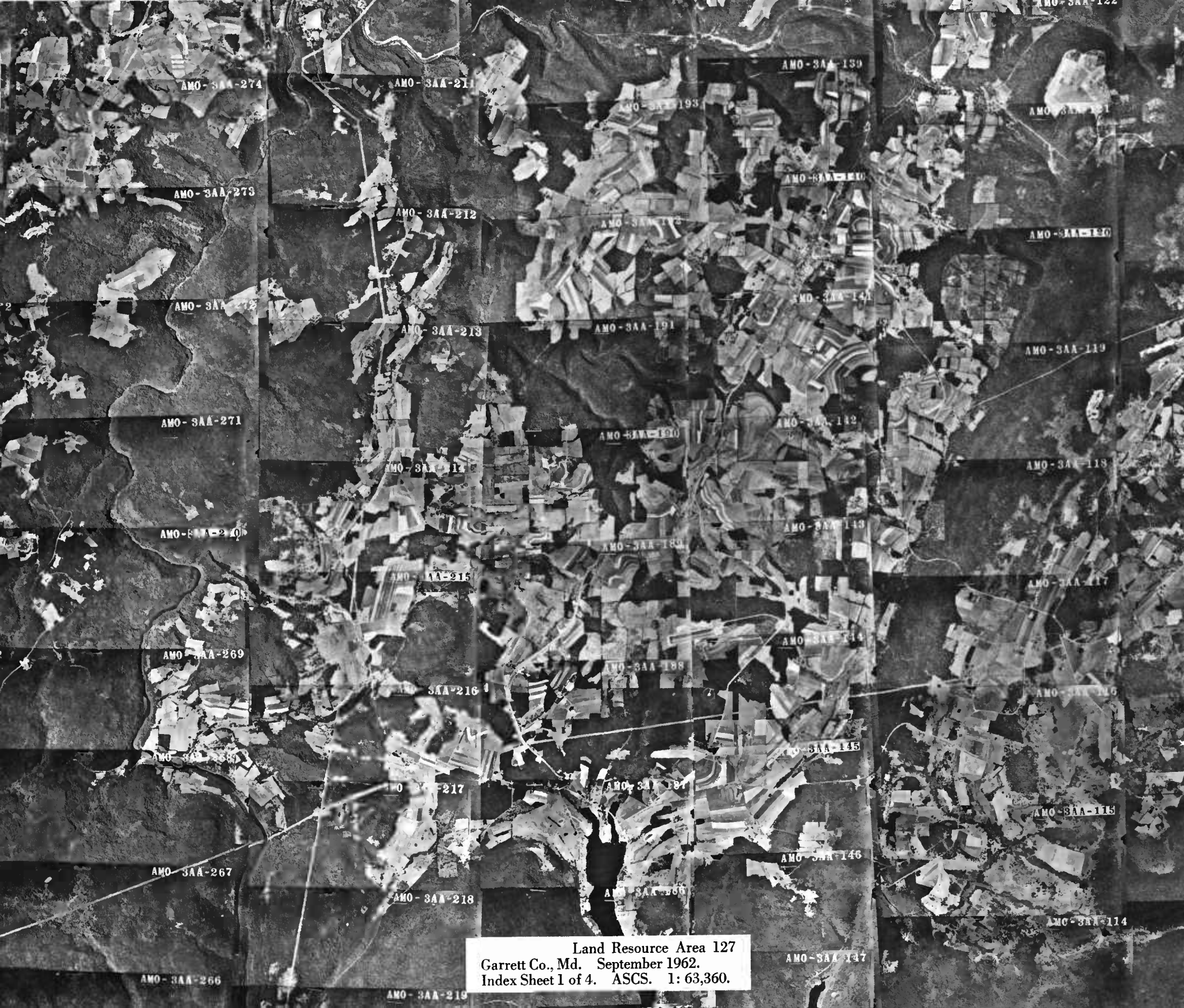
Climate: *Average annual precipitation*—35 to 45 inches; somewhat unevenly distributed; highest in midsummer and lowest in autumn and early winter. *Average annual temperature*—50° to 55° F. *Average freeze-free period*—160 days.

Water: Water is plentiful in the area. Water for domestic and livestock use is obtained from springs, shallow wells, small farm ponds, and cisterns. A large amount of ground water can be obtained from deep wells, but drilling is expensive and the water is highly mineralized. The Ohio River and its major tributaries have been developed for navigation by low dams and locks. The smaller streams have been little used as a water resource. Pollution of streams by wastes from coal mines is a serious problem.



Soil: *Sols Bruns Acides* (Muskingum) and *Gray-Brown Podzolic soils* (Gilpin), both derived from interbedded sandstones and shales and mainly on steep slopes, are the dominant soils of the area. Associated with them on steep slopes underlain by calcareous shales and limestones are *Gray-Brown Podzolic soils* (Upshur, Belmont, Westmoreland, and Guernsey). Upshur soils occur in complexes with Gilpin and Muskingum soils over much of the area. Another *Gray-Brown Podzolic soil* (Wheeling) on terraces of the Ohio River is an important agricultural

soil now being converted rapidly to urban and industrial uses. On gently sloping to rolling ridgetops underlain by clay shales *Red-Yellow Podzolic soils* (Cavode and Wharton) are conspicuous but of small total extent. *Alluvial soils* (Huntington and Lindside) occupy the broad flood plains of the Ohio River and its larger tributaries and are important agricultural soils. Along many of the smaller tributary streams Pope and Philo soils, also *Alluvial soils*, are extensive.



Land Resource Area 127
Garrett Co., Md. September 1962.
Index Sheet 1 of 4. ASCS. 1: 63,360.

127—Eastern Allegheny Plateau and Mountains

Pennsylvania, West Virginia, and Maryland
15,900 square miles

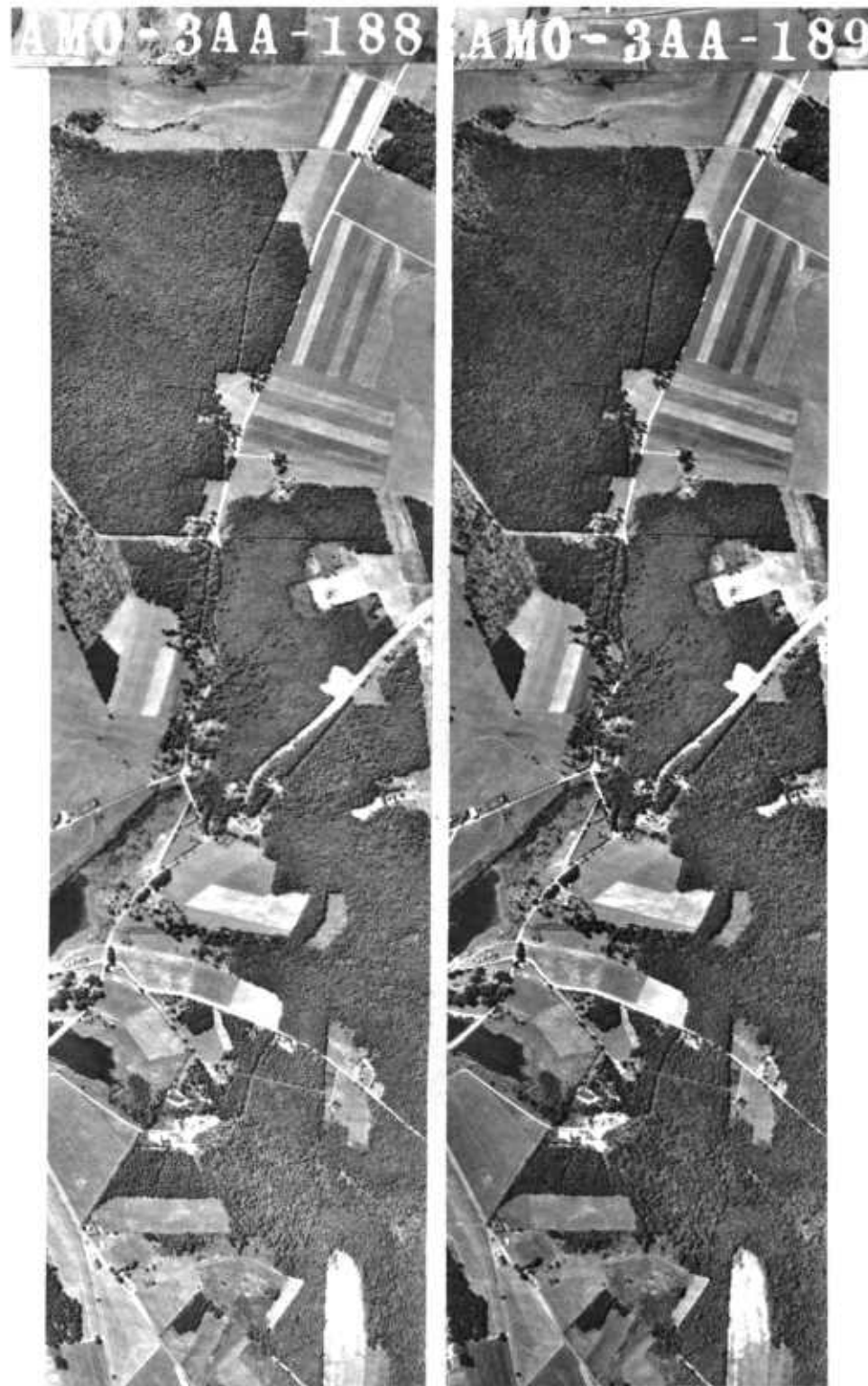
Land Use: Most of the area is in farms; about 15 percent is in other uses. About three-fourths is in forest, mainly in small privately owned holdings, but about one-tenth is in national forest and additional areas are in large holdings. Lumbering and wood-using industries are important. The oldest gas and oil fields in the United States are in the area, and coal mining is an important industry in places. About one-tenth of the area is cropland and an even smaller percentage is in pasture. Hay and other feed for dairy cattle are the major crops; small acreages are in fruits and vegetables, grown mainly for home consumption.

Elevation and Topography: 1,000 feet in the lowest valleys to 2,000 to 2,500 feet over much of the plateau top, mountains in the southeast 3,500 to 4,500 feet. This deeply dissected plateau terminates in a high escarpment on the east. Steep slopes are dominant but level to gently rolling plateau remnants are conspicuous in the north. Local relief is mainly in hundreds of feet, but some mountain peaks in the south rise 1,000 feet or more above the plateau or adjacent valleys.

Climate: *Average annual precipitation*—40 to 60 inches, increasing from north to south; highest from early spring through late summer and lowest in autumn and early winter. *Average annual temperature*—47° to 50° F. *Average freeze-free period*—120 to 170 days, increasing from north to south.

Water: Water is abundant. Domestic and livestock needs are supplied from shallow wells, springs, cisterns, and farm ponds. Ground water is scarce in the areas underlain mostly by shales; elsewhere it is plentiful but highly mineralized. The many perennial streams are potential water sources that are little used at present.

Soil: *Sols Bruns Acides* (Dekalb, Calvin, and Lehev) from acid gray sandstones and red shales are the dominant soils on the extensive steep slopes. Associated with them are *Gray-Brown Podzolic soils* (Gilpin and Belmont) also from shales, those under Belmont being red and calcareous. *Red-Yellow Podzolic soils* (Clymer, Cookport, Wharton, and Cavode) from acid sandstone and shale materials are on level to rolling ridgetops and *Alluvial soils* (Pope and Philo) and *Low-Humic Gley soils* (Atkins) on flood plains of the larger streams.





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DJA-3FF-81

DJA-3FF-53

DJA-2FF-5

DJA-3FF-80

DJA-3FF-54

DJA-5FF-11

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DJA-2FF-94

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DJA-3FF-12

DJA-2FF-90

DJA-5FF-6

DJA-3FF-74

DJA-3FF-60

DJA-3FF-11

DJA-2FF-89

DJA-5FF-5

DJA-3FF-73

DJA-3FF-60

DJA-3FF-10

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Land Resource Area 128
Augusta Co., Va. October 1966.
Index Sheet 5 of 6. P. ASCS. 1: 63,360.

DJA-2FF-87

128—Southern Appalachian Ridges and Valleys

Virginia, West Virginia, Tennessee, Georgia, and Alabama
28,600 square miles

Land Use: About three-fourths of the area is in farms, about one-twelfth is owned by the Federal Government, 1 or 2 percent is urban, and the remainder is in other uses. About one-half of the area is in forest, mainly small to medium-sized farm woodlots. Most of the Federally owned land is in national forests or national parks that are also wooded or in watershed-protection areas bordering Tennessee Valley Authority lakes and other reservoirs. About one-sixth is cropland and an equal amount is in pasture. Feed and forage crops for livestock occupy the largest acreage, but cotton in Georgia and Alabama and tobacco in the remainder of the area are important cash crops. Many vegetables and fruits are grown for home consumption throughout the area. Beef cattle are the principal livestock but dairying is important near the larger cities. Many of the farms in the area are small and give only part-time employment to the occupants.

Elevation and Topography: In valleys 600 feet in the southwest to more than 1,000 feet in the north; highest ridgetops 2,000 to 3,000 feet, rising gradually from south to north, and a few mountains in the north 4,000 feet or more. Northeast-southwest-trending valleys underlain mainly by limestones and shales are separated by steep ridges or mountains underlain mainly by sandstones and shales. Valleys are undulating to strongly rolling or hilly with local relief of a few tens to a few hundreds of feet. Ridges and mountains are mainly steep and rise several hundred to more than a thousand feet above adjacent valleys.

Climate: *Average annual precipitation*—35 to 55 inches, increasing from north to south; highest in midwinter and midsummer and least in autumn. *Average annual temperature*—50° to 60° F., decreasing from south to north. *Average freeze-free period*—160 to 220 days, decreasing from south to north.

Water: Crops and pasture depend almost entirely on rainfall for moisture, and reduced yields due to late summer and autumn droughts are common. Domestic and livestock needs are supplied by shallow wells, springs, ponds, and cisterns. In most areas underlain by limestone ground water is abundant but highly mineralized. Shale areas have small ground-water supplies and depend mainly on surface water and rainfall. Small streams vary in flow and most of them are dry in summer and autumn except immediately after storms. Major rivers have many dams for flood control, navigation, and power production and also provide recreation.



Soil: *Red-Yellow Podzolic soils* (Fullerton, Clarks-ville, Dunmore, Talbott, Colbert, Dewey, Sequoia, and Jefferson) are dominant in valleys throughout the area. Associated with them, mainly in materials from noncherty limestone, are *Reddish-Brown Lateritic soils* (Decatur, Cumberland, Tellico, and Neubert). On steeply sloping sandstone and shale ridges *Sols*

Bruns Acides (Muskingum, Berks, and Lehw) and *Lithosols* (Ramsey, Montevallo, and Dandridge) are the principal soils. *Alluvial soils* (Huntington, Lind-side, Newark, Pope, Stendal, and Philo) on narrow flood plains are of small total extent but are highly important to agriculture.



Land Resource Area 129
Cullman Co., Ala. October 1964.
Index Sheet 2 of 5. ASCS. 1: 63,360.

129—Sand Mountain

Alabama
8,700 square miles

Land Use: Most of this area is in farms; about 10 percent is urban or in other uses. About three-fifths is in forest, mainly in farm woodlots or other small holdings but some in large commercial holdings. Less than one-fifth of the area is cropland. Cash cropping of cotton and corn is the main farm enterprise but vegetables, fruits, and potatoes are grown also. Less than one-tenth of the area is in pasture. Only a few livestock are raised and most of the livestock products are consumed on the home farm.

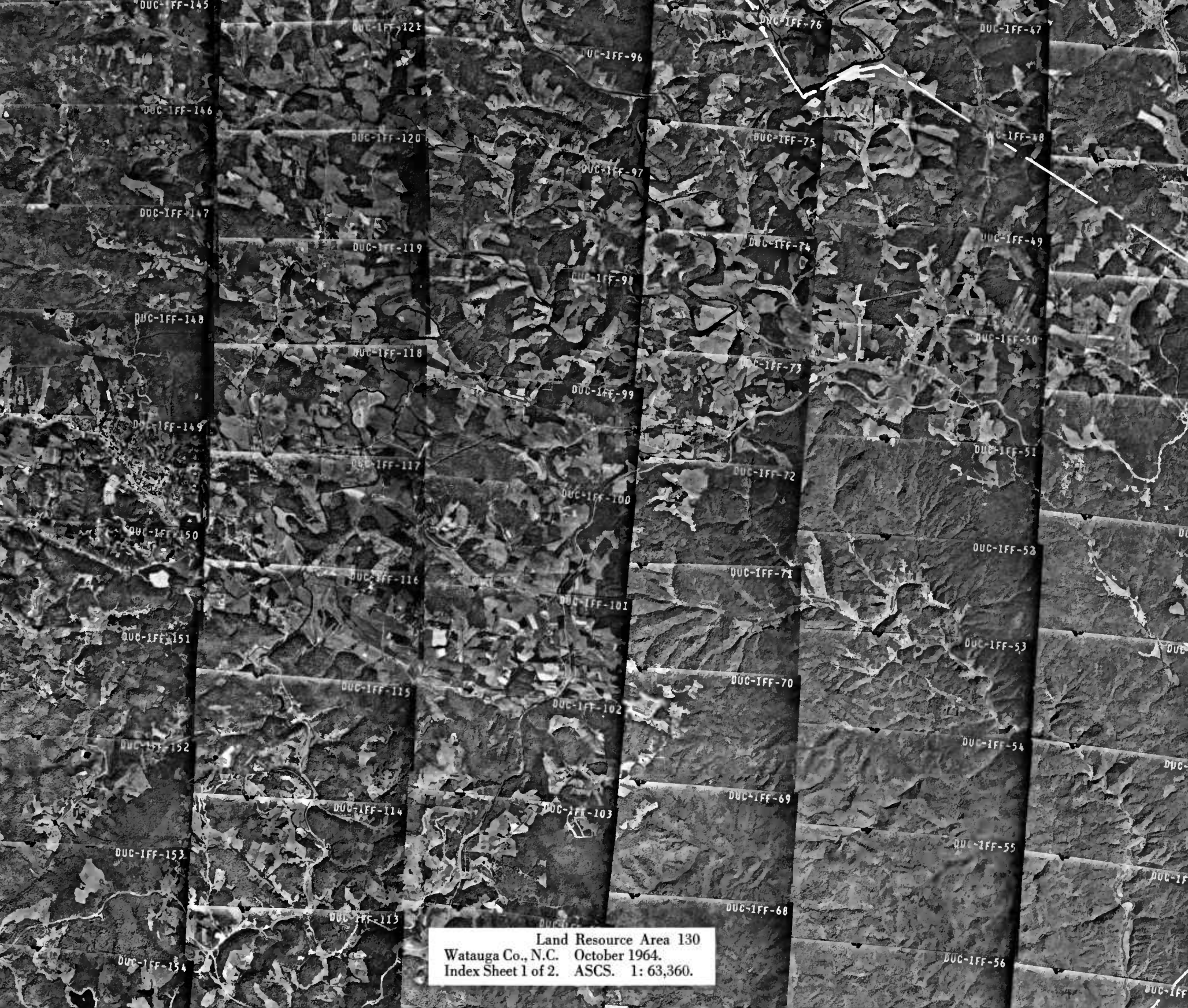
Elevation and Topography: 500 feet at the base of plateau escarpments to 1,000 feet at the plateau top, one or two mountain peaks 1,500 feet. The sandstone plateau has an undulating to rolling top but it is deeply dissected and steep along the margin. Local relief is in several tens of feet to one or two hundred feet on the plateau top, but the adjoining lowlands are several hundred feet below the plateau summit.

Climate: *Average annual precipitation*—About 54 inches; somewhat unevenly distributed; highest in midwinter, decreasing gradually from spring to autumn except slightly higher in midsummer. *Average annual temperature*—60° to 62° F. *Average freeze-free period*—Mainly 200 to 210 days and 240 days in some valleys.

Water: The plentiful rainfall is adequate for crops and pasture in most years. Droughts are less frequent and of shorter duration than in adjoining valleys. Water for livestock is available from streams, springs, and ponds. Shallow wells yield only small and uncertain amounts of water but deep wells yield large amounts and are dependable. Most streams flow intermittently and are dry in summer and autumn except after storms.

Soil: *Red-Yellow Podzolic soils* (Hartsells and Albertville) are the principal soils on the smooth plateau top. Associated with them are *Sols Bruns Acides* (Crossville). *Lithosols* (Ramsey) occupy steep mountain sides and valley walls.





Land Resource Area 130
Watauga Co., N.C. October 1964.
Index Sheet 1 of 2. ASCS. 1: 63,360.

130—Blue Ridge

North Carolina, Virginia, Georgia, Tennessee, South Carolina,
and Maryland
18,900 square miles

Land Use: Two-thirds or more of the area is in forest, much of which is privately owned. About a fifth of the area is in national parks and forests, but the proportion is much higher in Georgia and Tennessee. About one-tenth of the area, mainly on small farms in valleys and coves, is cropland and one-sixth is in pasture. Corn and hay are the most extensive crops; small grains, potatoes, and many kinds of fruits and vegetables are grown also. Tobacco is an important crop in some places. Most of the farms are part-time enterprises, and the occupants earn a large part of their livelihood elsewhere.

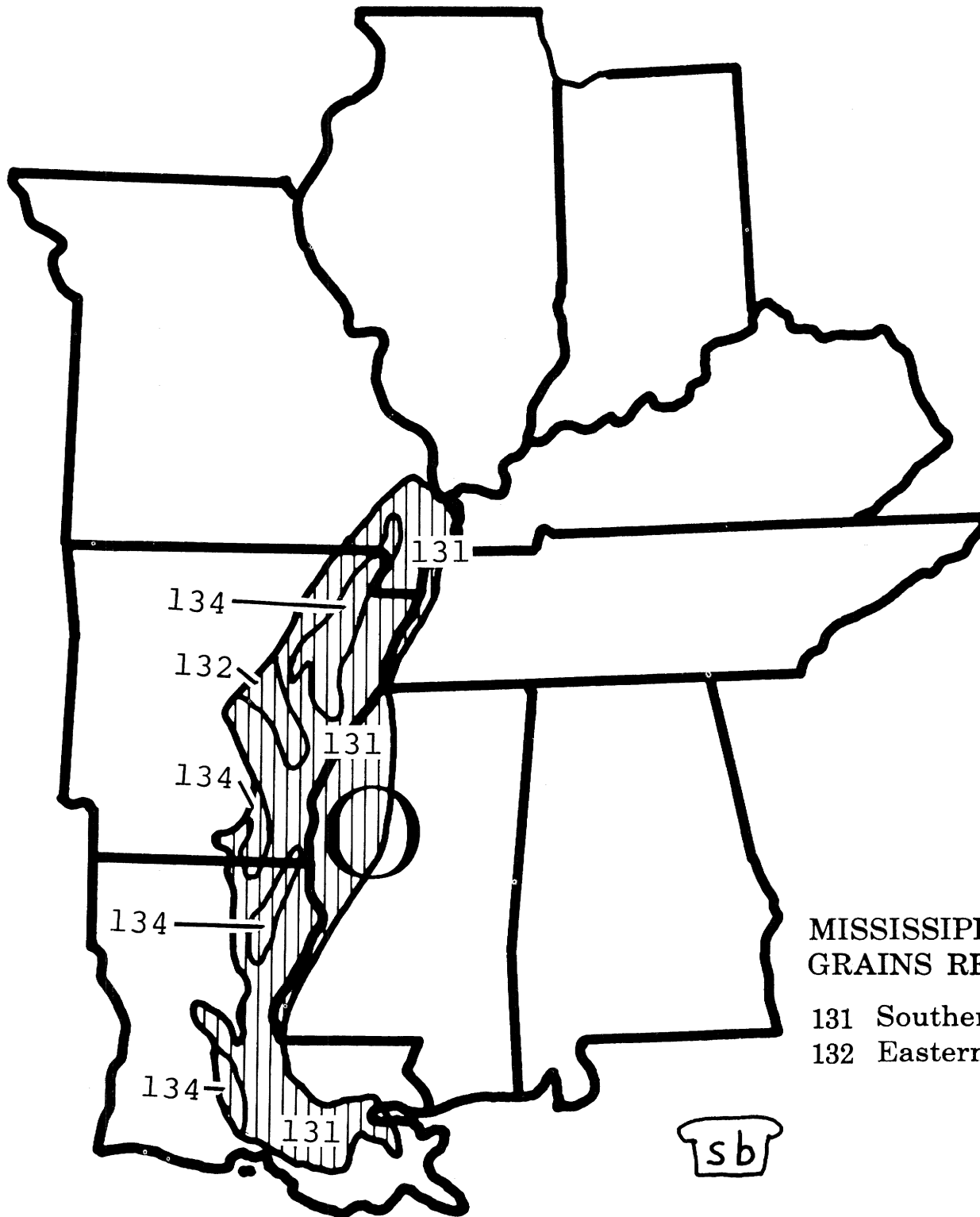
Elevation and Topography: 1,000 feet in the lower valleys and foot slopes to more than 6,500 feet in the mountains along the Tennessee-North Carolina boundary, decreasing gradually both north and south from this high point. The rugged mountains have steep slopes and sharp crests, and they are dissected by steep narrow valleys. Local relief is in several hundreds to a few thousands of feet.

Climate: *Average annual precipitation*—Mainly 40 to 50 inches but as much as 80 inches on highest peaks in the south; somewhat unevenly distributed; highest in midsummer and midwinter and least in autumn. *Average annual temperature*—50° to 60° F. *Average freeze-free period*—150 to 220 days, decreasing in length with increasing elevation and from south to north.

Water: Springs and shallow wells provide domestic water, but the ground-water yield from wells is generally small. Water for livestock comes largely from springs and perennial streams though some farm ponds have been built recently. In the southern two-thirds of the area the major rivers have many dams for flood control and electric-power production and are used for recreation.

Soil: On steep mountain slopes *Lithosols* (Talladega, Chandler, and Ramsey) and *Sols Bruns Acides* (Ashie and Ranger) are the principal soils. *Gray-Brown Podzolic soils* (Porters) are in the more deeply weathered material on some of the less sloping mountain sides. Rough stony land and rock outcrops are conspicuous on mountain slopes but their total area is small. In more deeply weathered residuum and in colluvium, especially at lower elevations, *Red-Yellow Podzolic soils* (Hayesville, Balfour, Tusquitee, and Tate) are extensive; associated with them on basic rocks are *Reddish-Brown Lateritic soils* (Rabun and Clifton). *Alluvial soils* (Congaree and Chewacla) are on narrow flood plains of the many stream valleys.





MISSISSIPPI DELTA COTTON AND FEED
GRAINS REGION

- 131 Southern Mississippi Valley Alluvium
- 132 Eastern Arkansas Prairies

sb

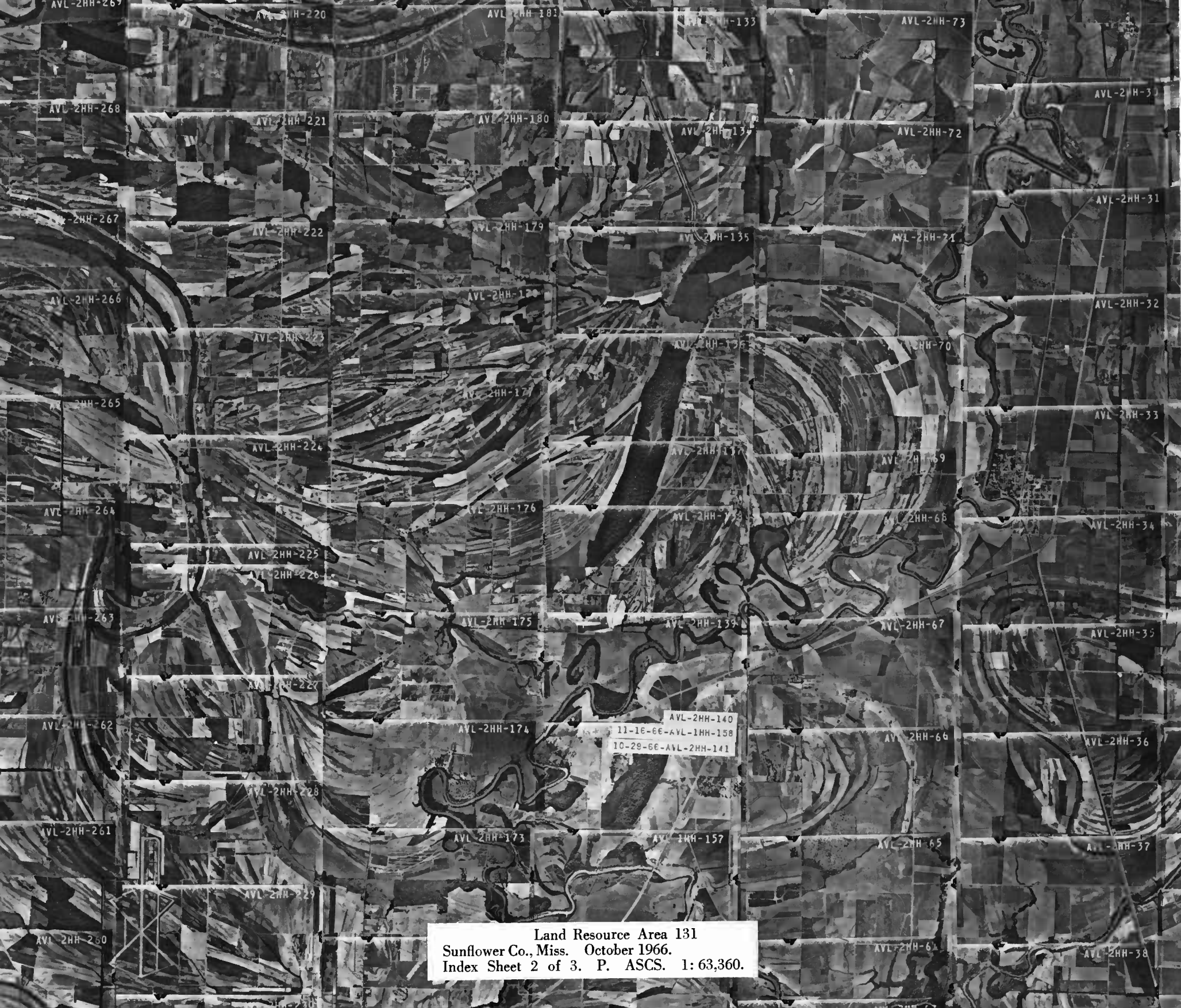
O—MISSISSIPPI DELTA COTTON AND FEED GRAINS REGION

45,600 square miles

This region consists of the flood plains and terraces of the Mississippi River south of its confluence with the Ohio River. The average annual precipitation ranges from 45 to 65 inches. Average annual temperatures are 58° to 70° F., and the freeze-free season is 200 to 280 days.

Low-Humic Gley soils, Humic Gley soils, Alluvial soils, and Grumusols are the extensive soils on flood plains and low terraces. Red-Yellow Podzolic soils are important on the higher silt-mantled terraces.

The soils throughout much of the region are naturally poorly drained and poorly suited to crops, but if they are artificially drained, they are highly productive of many crops. Cotton, soybeans, corn, and hay are grown throughout the region. Rice in Arkansas and Louisiana and sugarcane in Louisiana are important crops locally. The wettest areas that are not artificially drained remain in forests, which are important for hardwood-timber production.



Land Resource Area 131
Sunflower Co., Miss. October 1966.
Index Sheet 2 of 3. P. ASCS. 1: 63,360.

131—Southern Mississippi Valley Alluvium

Arkansas, Mississippi, Louisiana, Missouri, and Tennessee
36,600 square miles

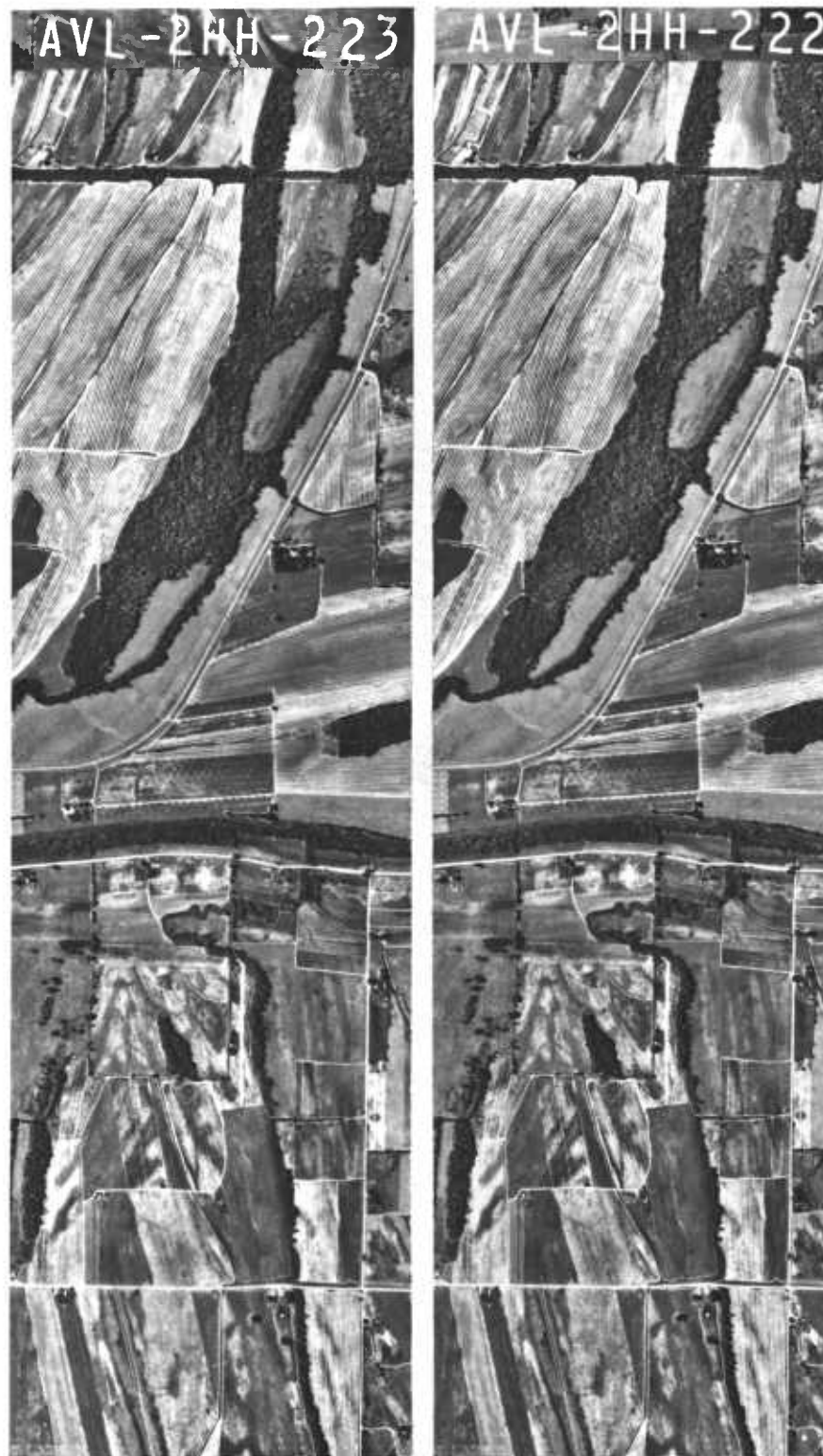
Land Use: Nearly all the area is in farms. For the area as a whole, about 10 percent is in woodland and the remainder is evenly divided between cropland and pasture. But the proportion of cropland is nearly three-fourths in the north and less than one-fourth in the south. The amount of land in forest varies inversely with that in crops; the amount in pasture is a little higher in the south. This is an important cash-crop area. Cotton, corn, and soybeans grown by highly mechanized methods are major crops throughout the area. Rice is an important crop in Arkansas and Louisiana and sugarcane in southern Louisiana.

Elevation and Topography: Sea level in the south, increasing gradually to about 500 feet in the north. The area consists of nearly level to gently sloping broad flood plains and low terraces. Most of the area is flat. The only noticeable slopes are sharp terrace scarps and natural levees that rise sharply a few feet to several tens of feet above adjacent bottom lands or stream channels.

Climate: *Average annual precipitation*—45 to 65 inches, increasing from north to south; over most of the area highest in winter and early spring, decreasing gradually to a minimum in autumn; along the Gulf Coast highest in midsummer and early autumn. *Average annual temperature*—58° to 70° F., increasing from north to south. *Average freeze-free period*—200 to 280 days, increasing from north to south.

Water: Rainfall, streamflow, and ground water supply an abundance of water. Surplus water is a serious problem on many of the soils, and artificial drainage is required before they can be used successfully for crops. The Mississippi River crosses the area from north to south and many of its tributaries also cross the area. Oxbow lakes and bayous are extensive throughout.

Soil: *Grumusols* (Sharkey, Alligator, Tunica, and Perry) formed in clayey alluvium are the most extensive. *Alluvial soils* (Commerce, Mhoon, and Robinsonville) are also important, and Adler soils from local alluvium lie at the foot of the adjoining bluffs in many places. *Low-Humic Gley soils* (Forestdale and Waverly) and *Humic Gley soils* (Jeanerette) are conspicuous on low terraces. On some of the older terraces *Gray-Brown Podzolic soils* (Dundee, Dubbs, and Bosket) are the major soils.





CCB-2EE-303

CCB-2EE-259

CCB-2EE-213

CCB-2EE-168

CCB-2EE-118

CCB-2EE-304

CCB-2EE-253

CCB-2EE-214

CCB-2EE-167

CCB-2EE-119

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CCB-2EE-256

CCB-2EE-215

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CCB-2EE-120

CCB-3EE-9

CCB-2EE-255

CCB-2EE-216

CCB-2EE-165

CCB-2EE-121

CCB-3EE-10

CCB-2EE-254

CCB-2EE-217

CCB-2EE-164

CCB-2EE-122

CCB-3EE-11

CCB-2EE-253

CCB-2EE-218

CCB-2EE-163

CCB-2EE-123

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CCB-2EE-124

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CCB-2EE-251

CCB-2EE-220

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-160

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Land Resource Area 132
Arkansas Co., Ark. January 1964.
Index Sheet 5 of 6. P. ASCS. 1:63,360.

132—Eastern Arkansas Prairies

Arkansas
7,000 square miles

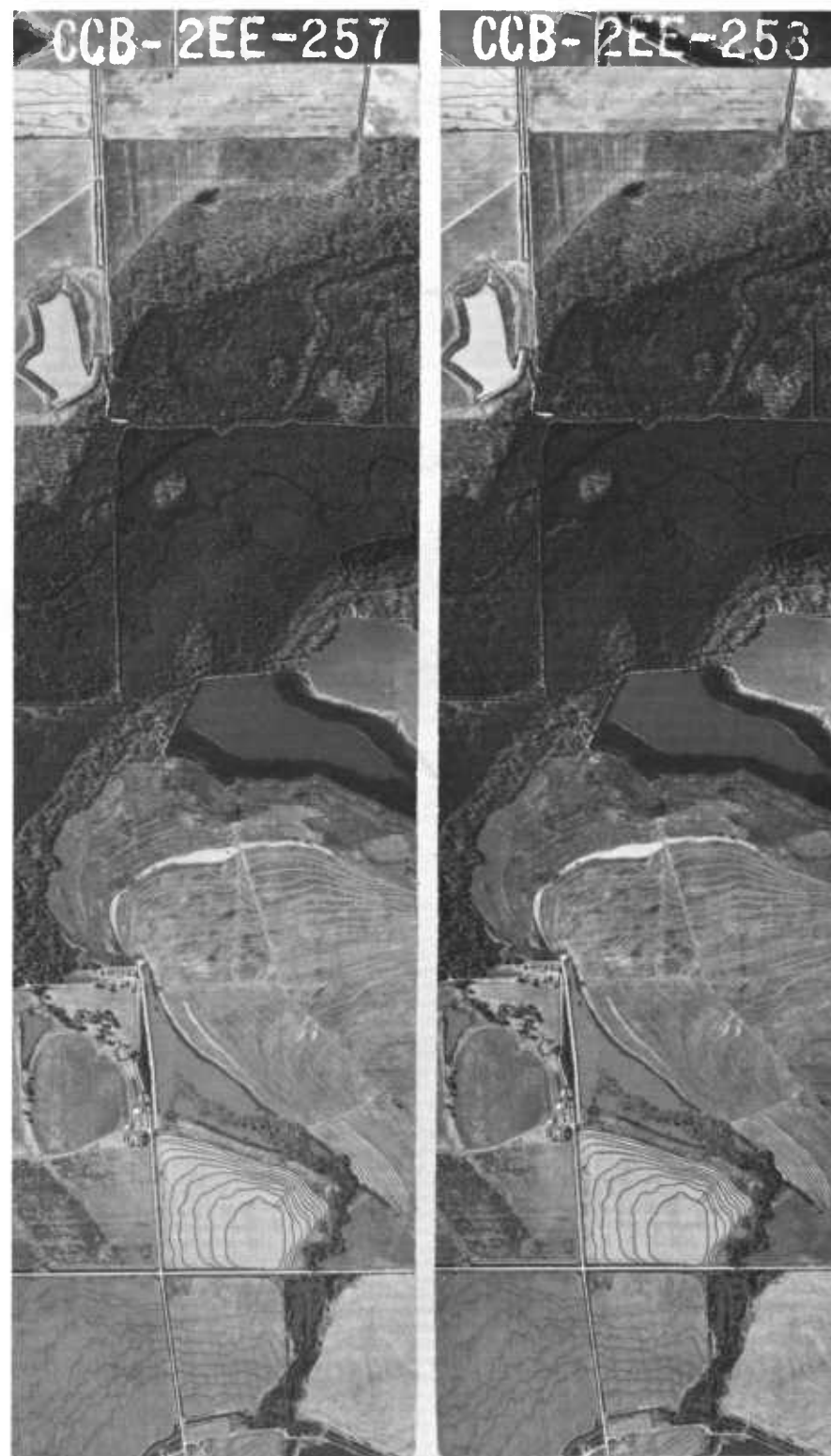
Land Use: Most of the area is in farms, but about 10 percent is urban or in other uses. About one-half is cropland and only a small amount is in pasture. Rice is the major crop in this cash-crop area. Cotton, corn, and soybeans are other important crops. About one-third of the area is in forest.

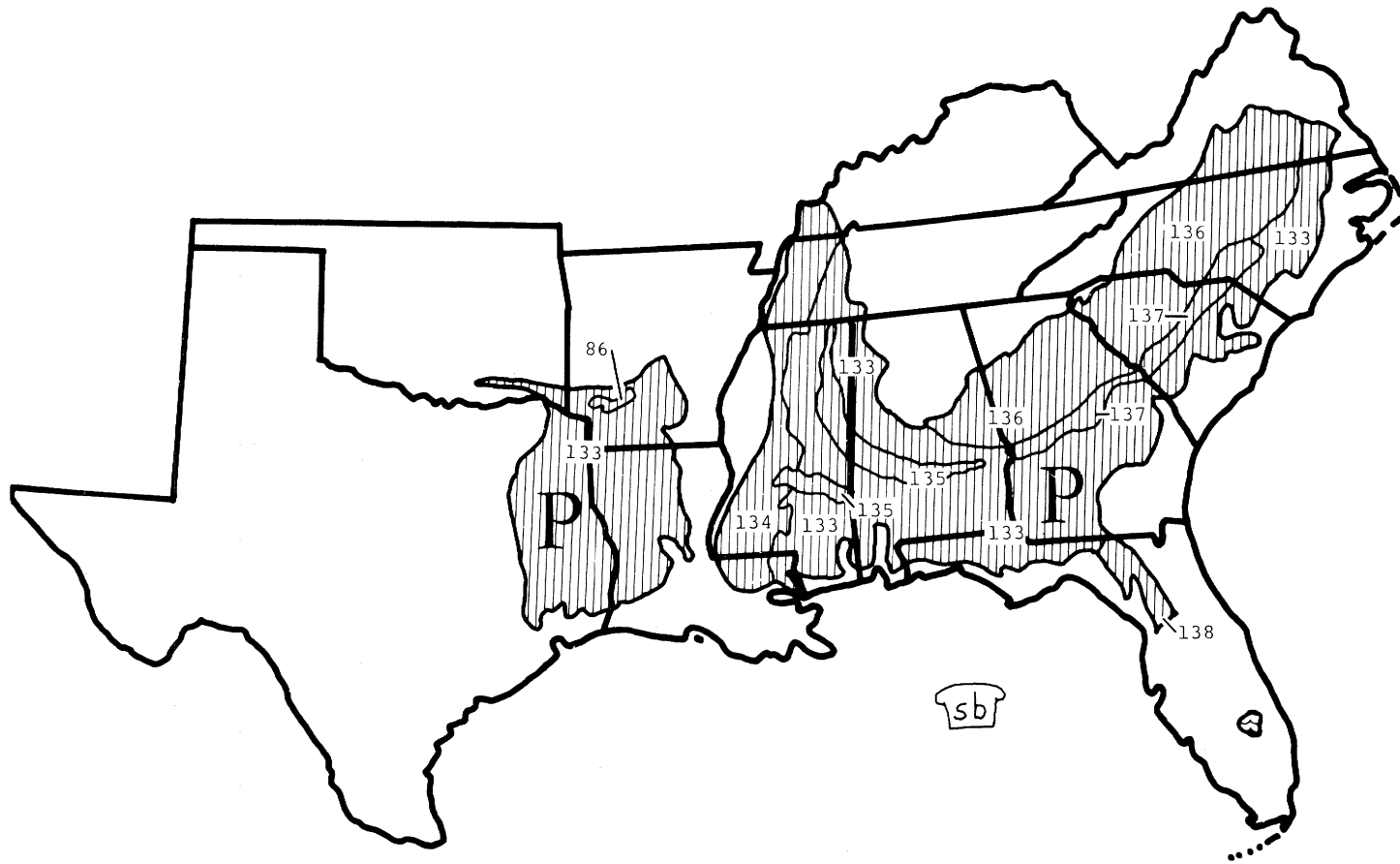
Elevation and Topography: 150 to 300 feet. Nearly level broad terraces are crossed by meandering streams having shallow valleys. The terraces terminate in short steep escarpments, and natural levees one to several tens of feet high border the stream channels. Elsewhere local relief is in only a few feet.

Climate: *Average annual precipitation*—About 50 inches; highest in winter and spring, decreasing through summer to a minimum in autumn. *Average annual temperature*—About 63° F. *Average freeze-free period*—About 220 days.

Water: Rainfall, ground water, and streamflow provide an abundance of water. Water for rice irrigation is stored in many artificial ponds and reservoirs, and water from wells is also used for this purpose. Except for rice, artificial drainage is required for the successful production of most crops. The many lakes and ponds, both natural and artificial, provide excellent hunting and fishing.

Soil: *Planosols* (Crowley) from fine-textured sediments on level terraces are the dominant soils. On better drained and less clayey materials *Gray-Brown Podzolic soils* having a fragipan (Grenada) are the major soils.





**SOUTH ATLANTIC AND GULF SLOPE CASH CROP,
FOREST, AND LIVESTOCK REGION**

- 133 Southern Coastal Plain
- 134 Southern Mississippi Valley Silty Uplands
- 135 Alabama and Mississippi Blackland Prairies
- 136 Southern Piedmont
- 137 Carolina and Georgia Sand Hills
- 138 North - Central Florida Ridge

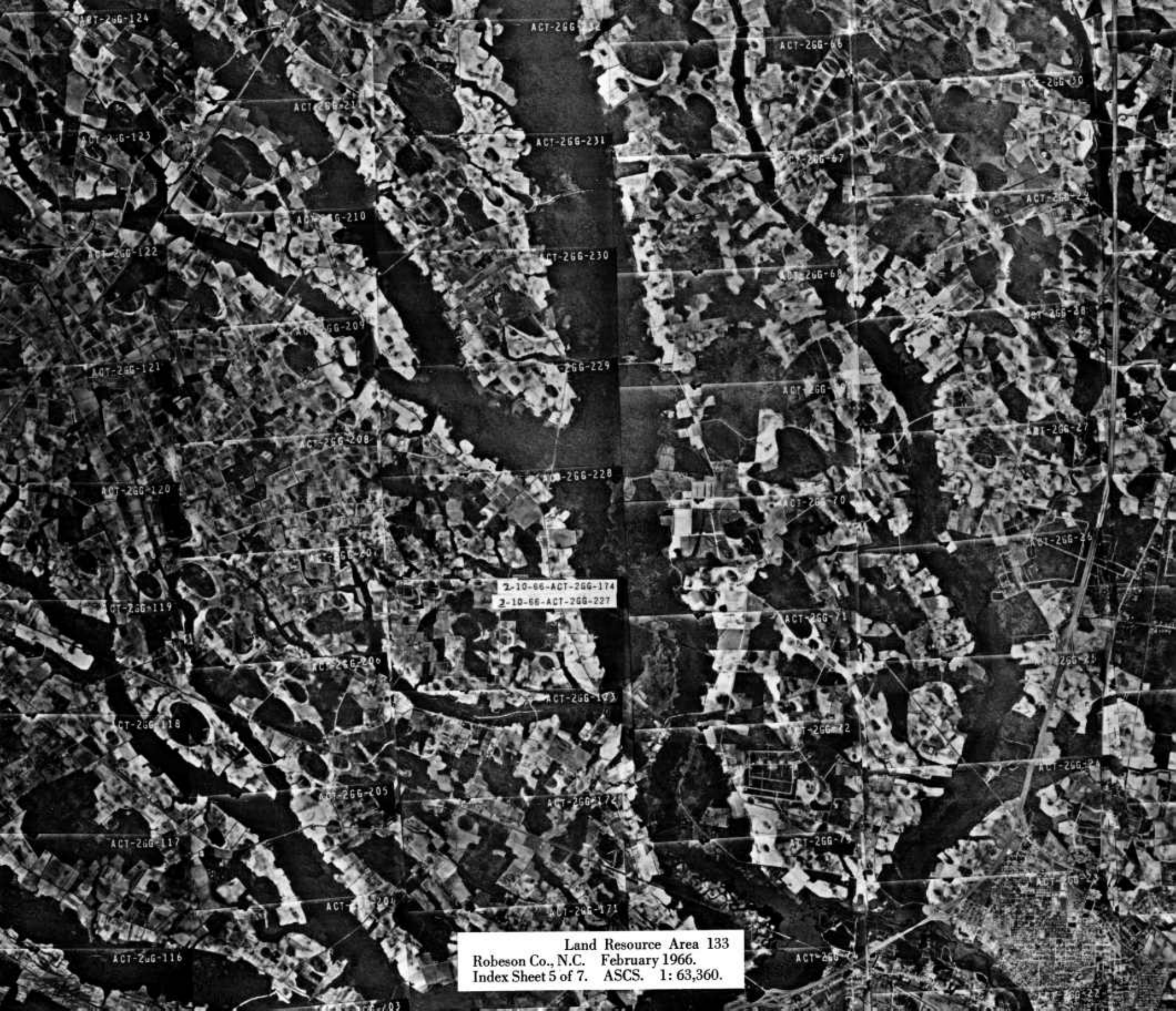
**P—SOUTH ATLANTIC AND GULF SLOPE CASH CROP,
FOREST, AND LIVESTOCK REGION**

250,200 square miles

This cotton-growing region consists of the gently sloping to rolling southern Piedmont and upper Coastal Plain. The average annual precipitation ranges from 40 to 60 inches; rainfall is considerably higher in mid-summer than in the rest of the year. Average annual temperatures are 60° to 68° F. over most of the area but are as low as 57° F. in some of the higher parts and as high as 71° F. in the extreme southeast. The freeze-free season is 200 days or more in most of the region and as long as 300 days in the southernmost part.

Red-Yellow Podzolic soils are dominant throughout the region. Reddish-Brown Lateritic soils from basic rocks are conspicuous locally as are Grumusols from marls or soft limestones. Alluvial soils on flood plains of the major streams are among the better soils for crops.

Cotton is the main cash crop throughout the region, but cotton acreage has been declining for many years. Peanuts and tobacco are also important, especially in the northeast. The acreage in improved pasture has been increasing, and much of the more sloping land is being returned to forest.



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ACT-266-125

ACT-266-66

ACT-266-30

ACT-266-21

ACT-266-231

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ACT-266-230

ACT-266-122

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ACT-266-26

ACT-266-207

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Land Resource Area 133
Robeson Co., N.C. February 1966.
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ACT-266-22

133—Southern Coastal Plain

Georgia, Alabama, Mississippi, Louisiana, Texas, Arkansas, Tennessee, North Carolina, South Carolina, Virginia, and Florida

145,300 square miles

Land Use: Nearly all the area is in farms. A small acreage is owned by the Federal Government, and additional small areas are urban or in other uses. Between one-half and three-fourths is woodland, nearly all in small holdings but some in large tracts. The proportion of woodland is greatest in the west. Lumber, pulpwood, and naval stores are the major forest products. Between one-tenth and one-third is cropland; the largest acreage is in the east. Less than one-tenth is in pasture. This is a cash-crop area, and cotton is a major crop. Peanuts, tobacco, melons, various vegetable crops, and corn are important also. The trend recently is to more pasture and woodland and less cropland.

Elevation and Topography: 100 to 600 feet, increasing gradually from the lower Coastal Plain to the Piedmont. The gently to strongly sloping dissected coastal plain is underlain by unconsolidated sands, silts, and clays. In their upper reaches stream valleys are narrow, but the lower parts of the valleys are broad and have widely meandering stream channels. Local relief is mainly in a few tens of feet, but some of the more deeply dissected parts have relief of 100 to 200 feet.

Climate: *Average annual precipitation*—40 to 60 inches; lowest in autumn throughout the area and highest in midsummer in the east and in winter and spring in the west. *Average annual temperature*—60° to 68° F., increasing from north to south. *Average freeze-free period*—200 to 280 days, increasing from north to south.

Water: Rainfall, many perennial streams, and ground water provide an abundance of water. Even though summer rainfall is fairly high, droughts are common and then good returns are obtained from irrigation on all but the wettest soils. Drainage is necessary before the wet lowlands can be used for crops. Domestic water supplies are obtained mainly from shallow wells and water for livestock from perennial streams and small farm ponds. The many perennial streams are potential water sources that have been little used in most of the area.

Soil: *Red-Yellow Podzolic soils* are dominant throughout (Ruston, Norfolk, Orangeburg, Saffell, and Lexington from sandy or gravelly materials; Marlboro, Bowie, Savannah, Shubuta, Kirvin, and Silerton from medium to moderately fine textured materials; and Boswell, Susquehanna, Sawyer, and Cuthbert in fine-textured materials). Associated with them on wet lowlands are *Low-Humic Gley soils* (Plummer, Bladen, Bibb, Falaya, and Coxville) and *Humic Gley soils* (Portsmouth, Bayboro, Weeks-

ville, and Johnston). *Reddish-Brown Lateritic soils* (Greenville, Red Bay, and Nacogdoches) are important locally, mainly in the south, but are of small total extent. *Regosols* (Eustis, Lakeland, and Kershaw) are on gently rolling to steeply sloping areas underlain by sands. *Alluvial soils* (Mantachie and Iuka) on narrow bottom lands are important to agriculture locally; in Texas and Louisiana, where the alluvium contains a large amount of material from red rocks, Miller and Yahola are important soils.





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ER-366-42

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ER-266-131

Land Resource Area 134
Madison Co., Miss. December 1965.
Index Sheet 4 of 5. ASCS. 1:63,360.

ASC 12-7-65-ER-266-139
12-7-65-ER-266-137

ER-266-176

134—Southern Mississippi Valley Silty Uplands

Mississippi, Tennessee, and Kentucky
24,000 square miles
Louisiana and Arkansas
2,000 square miles

Land Use: Most of the land is in farms, a small amount is Federally owned, and other small areas are urban or in other uses. About a third of the whole area is cropland but the amount of cropland varies greatly from county to county, depending on soils and topography. This is largely a cash-crop area. Cotton, corn, and soybeans are major crops, but rice is important locally in Arkansas and strawberries in Louisiana. Feed grains and forage are grown on dairy farms, mainly near the larger towns and cities. Only about a tenth of the area is in pasture, but the present trend is to a moderate increase in land in pasture. About one-fourth is in forest. Lumber is the major forest product and some pulpwood is harvested.

Elevation and Topography: 100 to 600 feet. The sharply dissected plains have a thick loess mantle, which is underlain by unconsolidated sands, silts, and clays, mainly of marine origin. Valley sides are hilly to steep, especially in the west. The intervening ridges are mostly narrow and rolling, but some of the interfluves between the upper reaches of the valleys are broad and flat. Stream valleys are narrow in their upper reaches but broaden rapidly downstream and have wide flat flood plains and meandering stream channels. Local relief is mainly in several tens of feet to 100 or 200 feet.

Climate: *Average annual precipitation*—46 to 60 inches, increasing from north to south; highest in winter and spring, decreasing gradually through summer to autumn except for a moderate increase in midsummer. *Average annual temperature*—60° to 68° F., increasing from north to south. *Average freeze-free period*—200 to 280 days, increasing from north to south.

Water: Rainfall and ground water are abundant. In the uplands shallow wells, cisterns, and ponds are the main water sources for domestic use and livestock. Shallow wells provide only small amounts of water but deep wells in the underlying sands and gravels yield large amounts. Most streams in the area are small and flow intermittently. They flow most of the time in winter and spring but only during and immediately after storms in summer and autumn.



Soil: *Gray-Brown Podzolic soils* (Memphis, Loring, and Grenada) that formed in thick loess on gently rolling to hilly uplands and terraces are the dominant soils. On associated level arcas *Planosols* (Calloway and Henry) are conspicuous. All these soils except Memphis have a strongly expressed fragipan. In the east, where the loess mantle thins, *Red-Yellow Podzolic soils* (Lexington, Brandon, Providence,

Lax, and Silerton) are the major soils. *Alluvial soils* (Vicksburg, Collins, and Mantachie) and *Low-Humic Gley soils* (Waverly, Falaya, and Bibb) on the broad flood plains in the west are some of the most important agricultural soils. Small areas of *Solonetz soils* (Lafe, Foley, and Verdun) are conspicuous, especially in Louisiana.



Land Resource Area 135
Dallas Co., Ala. October 1965.
Index Sheet 3 of 8. ASCS. 1:63,360.

135—Alabama and Mississippi Blackland Prairies

Alabama and Mississippi
9,000 square miles

Land Use: Most of the land is in farms but a small amount is urban or in other uses. Slightly less than one-fifth is cropland. This is a cash-crop area; cotton, soybeans, and corn are the main crops. Some hay and small grains are grown also. A little more than one-fourth of the area is in pasture grazed mostly by beef cattle. The trend recently is to an increase in pasture acreage and a decrease in cropland. About two-fifths is in forest, nearly all in farm woodlots.

Elevation and Topography: 100 to 300 feet, a few hills 500 feet. The dissected uplands are underlain by clays, marls, and chalk. Slopes are nearly level to gently rolling. Local relief is mainly in a few feet to a few tens of feet. Large streams have broad level relatively shallow valleys.

Climate: *Average annual precipitation*—48 to 56 inches; highest in early winter, spring, and midsummer, lower in early summer, and least in autumn. *Average annual temperature*—60° to 65° F., decreasing from south to north. *Average freeze-free period*—230 to 260 days.

Water: Rainfall and perennial streams are important water sources, but ground water from moderately deep and deep wells is the principal source for both domestic and municipal uses. Many ponds provide water for livestock and also serve for recreation. Some of the perennial streams are potential water sources but are not much used at present.

Soil: *Red-Yellow Podzolic soils* (Oktibbeha and Vaiden) from acid clays are the dominant soils at the highest elevations. *Grumusols* (Houston and Brooksville) are on the smooth parts of uplands underlain by marl and chalk and *Rendzinas* (Binnsville and Sumter) are on the more sloping parts. *Alluvial soils* (Leeper, Catalpa, and Kaufman) are on broad flood plains and *Low-Humic Gley soils* (Tuscumbia and Una) and wet *Grumusols* (West Point and Eutaw) on poorly drained flats of both uplands and flood plains.



136—Southern Piedmont

Virginia, North Carolina, South Carolina, Georgia, and Alabama
59,000 square miles

Land Use: Most of the land is in farms, a small amount is Federally owned, and other small areas are urban or in other uses. Only about a fifth of the area is cropland. This is a cash-crop area; cotton is the major crop although tobacco is important in the northern one-third. Corn, grain sorghum, small grains, and hay are other important crops. Less than a tenth of the area is in pasture. The trend recently has been to an increase in livestock farming and dairying, accompanied by an increase in pasture acreage and a decrease in cropland. About three-fifths is in forest, mostly in farm woodlots, but a few large areas are in national forests and other large holdings. Pulpwood is the major forest product, but hardwood and pine lumber is also important.

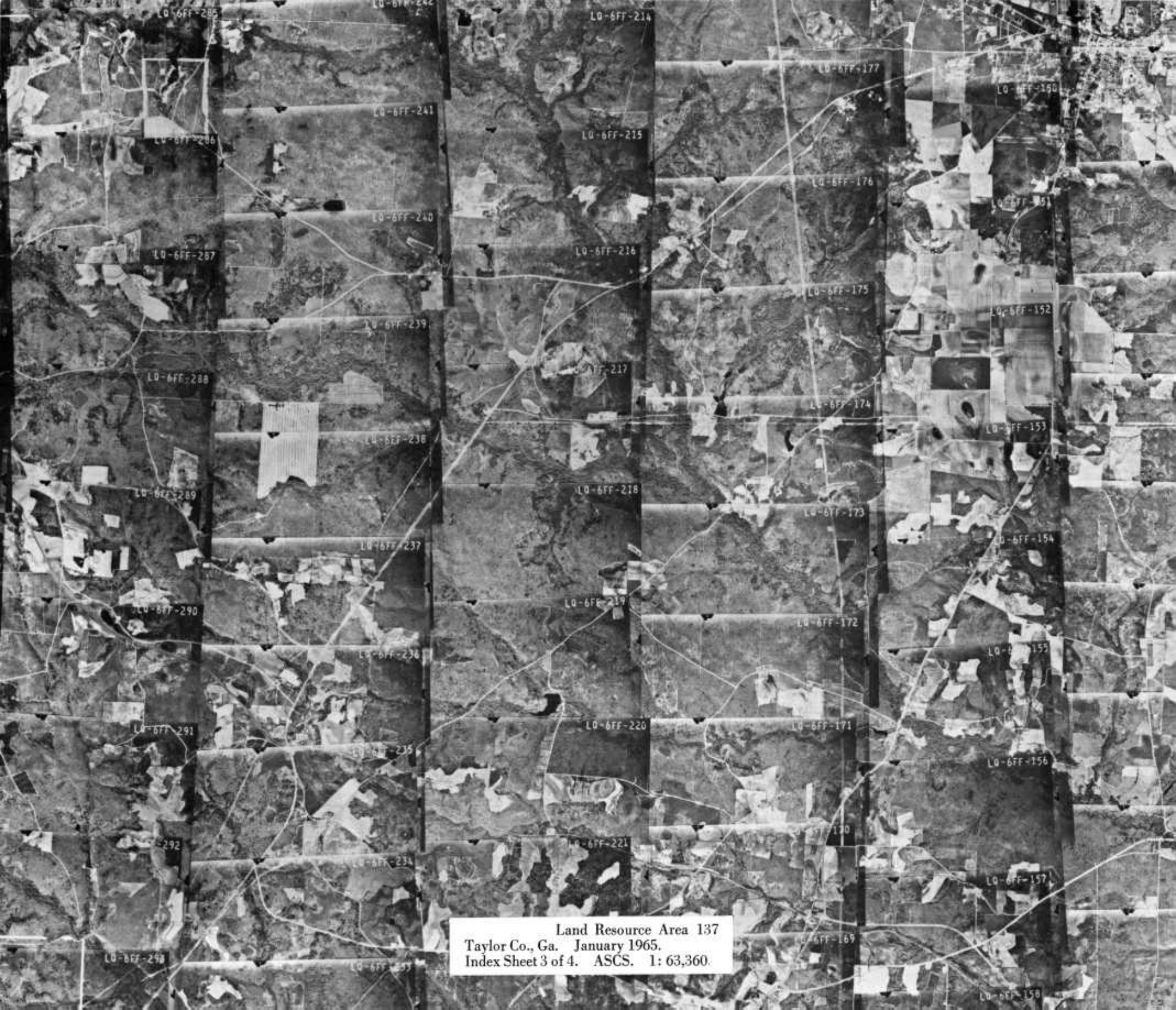
Elevation and Topography: 300 to 1,000 feet, increasing gradually from east to west. This dissected plateau is underlain mostly by schists, gneisses, and granites and by some basic crystalline rocks, sandstones, and slates. Topography is gently rolling to hilly and stream valleys are narrow. Local relief is mainly in several tens of feet to 100 or 200 feet, but some foothills in the west have relief of several hundred feet.

Climate: *Average annual precipitation*—45 to 55 inches; evenly distributed through the year except slightly higher in midsummer. *Average annual temperature*—57° to 65° F. *Average freeze-free period*—200 to 250 days, decreasing from south to north and with elevation.

Water: Rainfall and perennial streams are the major sources of water. Ground-water supplies are small, but shallow and deep wells are the principal water sources for domestic use. Streams, springs, and many small ponds are the important sources of livestock water. The potentially large water supplies from perennial streams are not much exploited at present. Small streams are dry during most of summer and autumn except immediately after storms.

Soil: *Red-Yellow Podzolic soils* are dominant (Cecil, Appling, and Madison from acid crystalline rocks; Lloyd and Enon from less acid crystalline rocks; Georgeville, Herndon, and Alamance from slates; and Mayodan, Wadesboro, and Granville from Triassic sandstones and shales). *Reddish-Brown Lateritic soils* (Davidson and Mecklenburg) are on uplands underlain by basic crystalline rocks and *Planosols* (Iredell and Elbert) are associated with them on foot slopes or wet upland flats. Shallow *Sols Bruns Acides* (Louisa, Louisburg, Brandywine, and Wilkes) are on strongly rolling to steep slopes throughout the area.





Land Resource Area 137
Taylor Co., Ga. January 1965.
Index Sheet 3 of 4. ASCS. 1: 63,360.

137—Carolina and Georgia Sand Hills

Georgia, South Carolina, and North Carolina
8,200 square miles

Land Use: Most of the area is in farms; about one-sixth is owned by the Federal Government and is used for military posts and training areas. Additional small parts are urban or in other uses. Nearly three-fifths of the area is in forest of scrub oak and pine. Pulpwood and some lumber are the principal forest products. About one-fifth of the area is cropland and only a very small amount is in pasture. Corn and cotton are the principal crops. Most of the farms are part-time or subsistence farms.

Elevation and Topography: 200 to 500 feet, increasing gradually from south to north. The area is a dissected rolling to hilly upland. In many of the more dissected areas there are stabilized dunes, resulting in very irregular slopes. Local relief is mainly in tens of feet, but a few hills are 100 or 200 feet above adjacent areas.

Climate: *Average annual precipitation*—45 to 50 inches; highest in midsummer and least in autumn. *Average annual temperature*—62° to 65° F. *Average freeze-free period*—220 to 240 days.

Water: Rainfall, perennial streams, and ground water supply an abundance of water. The kind and amount of plant growth is severely limited by low moisture in the rapidly permeable soils that are dominant in this area.

Soil: *Regosols* in deep sands and gravels (Lakeland, Eustis, and Kershaw) on rolling to hilly slopes are dominant. *Red-Yellow Podzolic soils* (Gilead, Vaucluse, Norfolk, Cuthbert, and Hoffman) occur where the upper sandy strata are underlain by more clayey material and are the soils used from crops.



138—North Central Florida Ridge

Florida

4,000 square miles

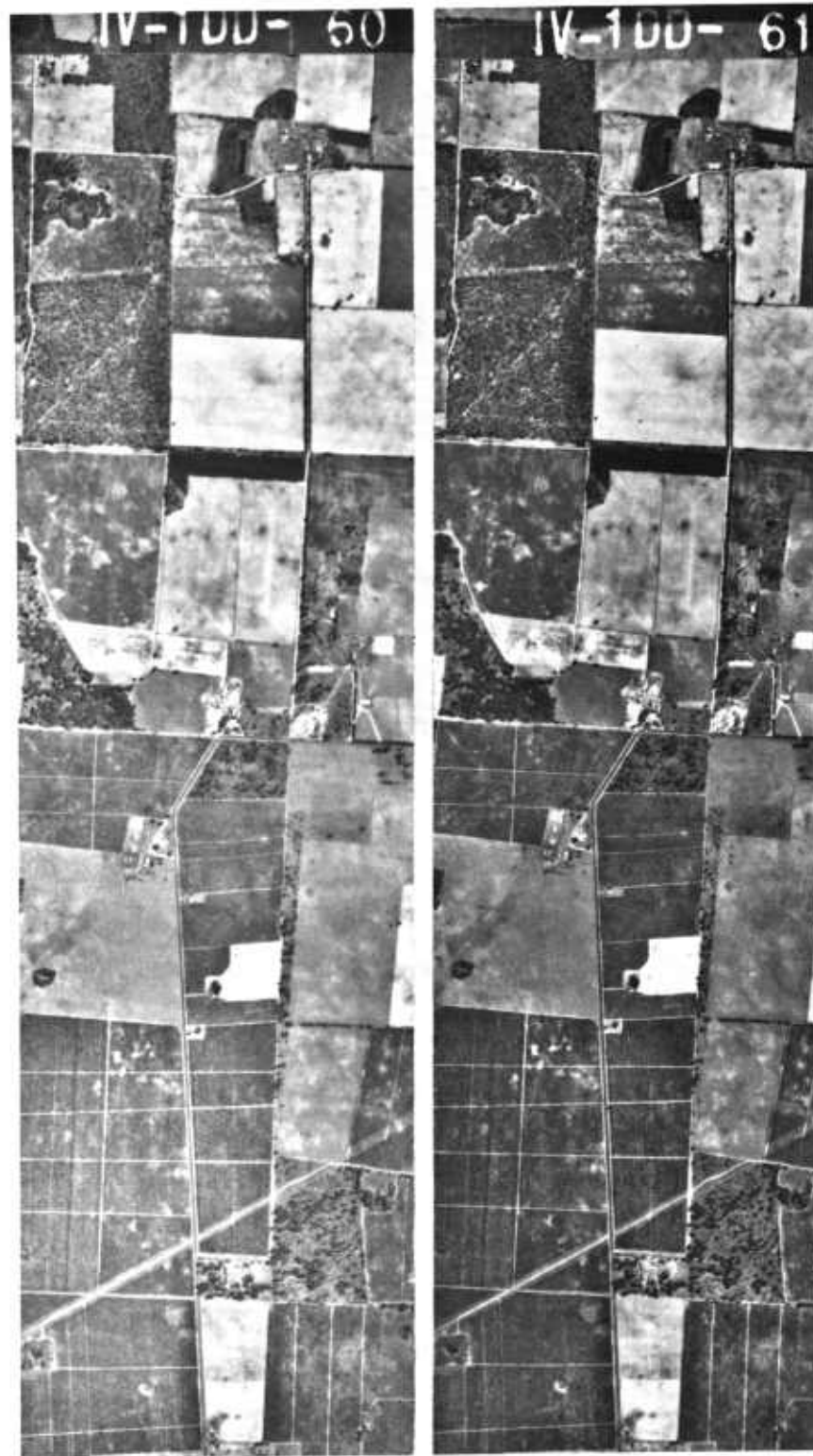
Land Use: Most of the land is in farms but some large holdings are used for grazing and forestry. About one-fourth of the area is cropland and an additional 5 to 10 percent is in pasture. Corn, peanuts, tobacco, vegetables, and melons are major crops. Tung orchards are important in places. Some hay and feed grains are grown for livestock, and the trend is to an increase in these crops and in pasture. More than one-half of the area is in forest, a large part of which is used as range for cattle. Lumber, pulpwood, and naval stores are other forest products.

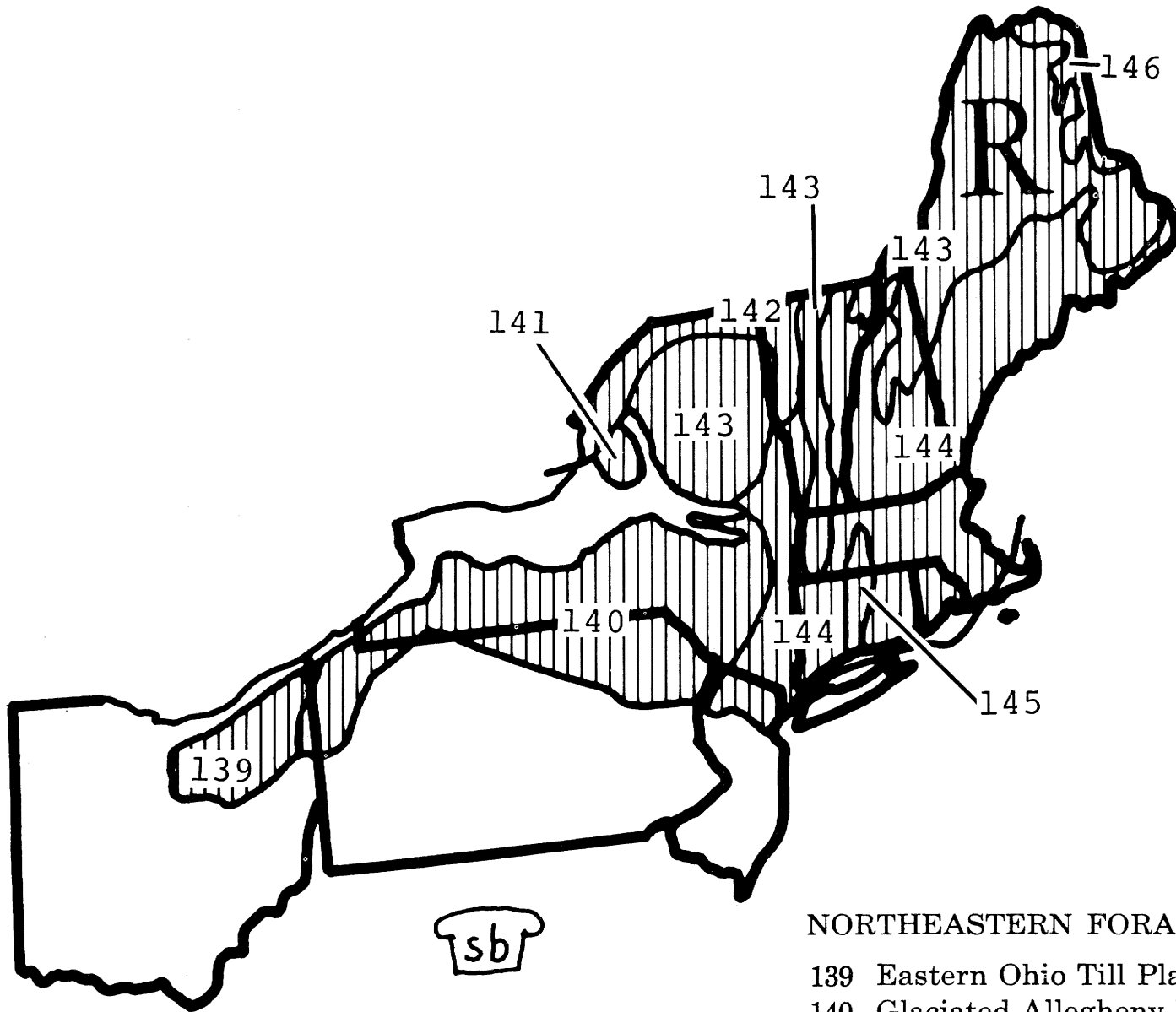
Elevation and Topography: 50 to 200 feet. The sand-mantled limestone upland has irregular gently rolling topography. Many limestone sinks, some filled with water, dot the area. There are a few streams. Local relief is in a few feet to a few tens of feet.

Climate: *Average annual precipitation*—50 to 55 inches; lowest in winter, increasing slightly in spring, and highest in summer and early autumn. *Average annual temperature*—68° to 71° F. *Average freeze-free period*—280 to 300 days.

Water: The abundant rainfall and ground water are the principal water sources. Shallow and deep wells provide water for domestic and livestock use and are also used as a source of irrigation water. The many lakes and ponds are used for recreation.

Soil: *Regosols* (Fort Meade, Eustis, Blanton, Lakeland, Orlando, and Gainesville) from deep sands are the dominant soils over much of the area. In some places, mainly in the south, where sands are underlain by more clayey materials *Red-Yellow Podzolic soils* (Ruston, Zuber, Blichton, and Hernando) are extensive. On the wettest areas *Humic Gley soils* (Fellowship, Rutlege, and Pocomoke) are conspicuous but their total area is small. Of greater extent on broad flats and in depressions are *Low-Humic Gley soils* (Plummer, Rains, and Weston).





NORTHEASTERN FORAGE AND FOREST REGION

- 139 Eastern Ohio Till Plain
- 140 Glaciated Allegheny Plateau and Catskill Mountains
- 141 Tughill Plateau
- 142 St. Lawrence - Champlain Plain
- 143 Northeastern Mountains
- 144 New England and Eastern New York Upland
- 145 Connecticut Valley
- 146 Aroostook Area

R—NORTHEASTERN FORAGE AND FOREST REGION

121,600 square miles

This cool, humid region consists of plateaus, plains, and mountains. The annual precipitation ranges from 30 to 50 inches; more than one-half occurs during the freeze-free season in most of the region. Average annual temperatures are 37° to 50° F. The freeze-free season is 120 to 160 days over most of the region but is less than 120 days in the higher mountains and as long as 180 days in a narrow belt along the Atlantic Coast.

Sols Bruns Acides and Podzols, both commonly having a fragipan, are the dominant soils of the region. Humic Gley soils, Low-Humic Gley soils, and Bog soils occupy the lowlands and depressions. Stoniness imposes serious restrictions on the use of many of the soils.

The production of forage for dairy cattle is the principal use of much of the farmland in the region. Where markets, climate, and soils are favorable, fruits, tobacco, potatoes, and various vegetable crops are important locally. The steeper land is mainly in forests, which produce significant amounts of timber; their use for recreation is probably more important in this highly urbanized region.



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CNC-3FF-27

CNC-2FF-168

CNC-2FF-105

CNC-3FF-116

CNC-3FF-88

CNC-3FF-28

CNC-2FF-167

CNC-2FF-106

CNC-3FF-117

CNC-3FF-87

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CNC-2FF-166

CNC-2FF-107

CNC-3FF-118

CNC-3FF-86

CNC-3FF-30

CNC-2FF-165

CNC-2FF-108

CNC-3FF-119

CNC-3FF-85

CNC-3FF-31

CNC-2FF-164

CNC-2FF-109

CNC-3FF-120

CNC-3FF-84

CNC-3FF-32

CNC-2FF-163

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CNC-2FF-113

Land Resource Area 139
Wayne Co., Ohio. August 1965.
Index Sheet 2 of 4. ASCS. 1: 63,360.

139—Eastern Ohio Till Plain

Ohio
6,500 square miles

Land Use: About three-fourths of the area is in farms, one-fifth is urban, and the remainder is in other uses. About one-third is cropland. Feed grains and forage for dairy cattle are the main crops in the west. Similar crops are grown in the east, where there are many part-time farms and many rural residences. Slightly more than 10 percent is in pasture. About one-fifth is in hardwood forest, mainly farm woodlots. Some large holdings are used for watershed protection.

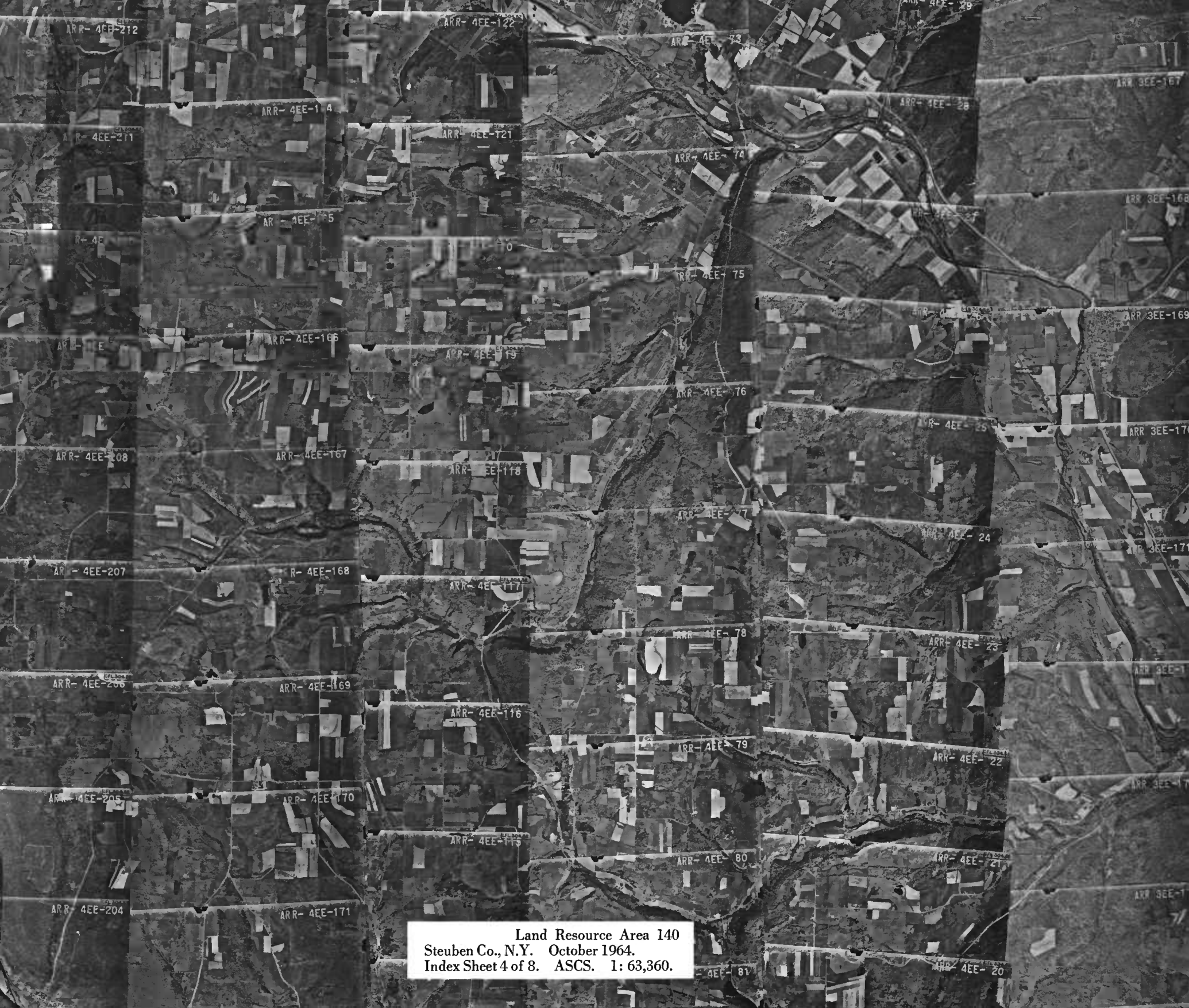
Elevation and Topography: 800 to 1,000 feet, increasing gradually from north to south. The gently to strongly rolling dissected glaciated plateau is underlain by limestone and sandstone. Stream valleys are narrow and not deeply incised. In places the interfluvies are broad and nearly level. Local relief is in a few feet to a few tens of feet.

Climate: *Average annual precipitation*—35 to 40 inches; fairly evenly distributed through the year although slightly higher in spring and early summer and lowest in winter; winter precipitation is mostly snow. *Average annual temperature*—About 50° F. *Average freeze-free period*—About 160 days.

Water: Rainfall, perennial streams, and ground water provide an abundance of water. Shallow and deep wells are the main sources of water for domestic use and municipal supplies. On many farms small artificial ponds provide water for livestock and supplemental irrigation and are used for recreation. Large reservoirs on perennial streams provide water for several of the large cities.

Soil: *Gray-Brown Podzolic soils*, many having a fragipan, are dominant (Wooster, Canfield, Mahoning, Ellsworth, and Rittman from medium- to fine-textured glacial till; imperfectly drained Ravenna and Wadsworth; and Chili from coarse-textured glacial outwash). Other soils are *Low-Humic Gley soils* (Trumbull) and where parent materials are less clayey and more acid, *Sols Bruns Acides* (Venango).





Land Resource Area 140
Steuben Co., N.Y. October 1964.
Index Sheet 4 of 8. ASCS. 1: 63,360.

140—Glaciated Allegheny Plateau and Catskill Mountains

New York and Pennsylvania
27,400 square miles

Land Use: Most of the area is in farms but a large acreage is in cutover forests of mixed hardwoods. The Catskills are used mainly for recreation. Hay, pasture, and some grain for dairy cattle are the principal crops. Potatoes are important locally on the plateau top, and poultry, fruits, and truck crops are produced in many of the narrow valleys. Abandoned or idle areas are in poverty grass, weeds, and shrubs.

Elevation and Topography: Valley floors 500 to 1,000 feet, plateau tops 1,700 to 2,000 feet, and parts of the Catskills 3,500 feet or more. The tops of the dissected plateau are broad and nearly level to moderately sloping. The narrow valleys have steep walls and smooth floors. The Catskills in the east have steep slopes.

Climate: *Average annual precipitation*—30 to 40 inches; half or more falls during the growing season; winter precipitation is mostly snow. *Average annual temperature*—47° to 50° F. *Average freeze-free period*—110 to 160 day.

Water: Rainfall and perennial streams and lakes provide an abundance of water. The Finger Lakes are a conspicuous feature along the northern border. Soils with fragipans have extremes of moisture. They are too wet in winter and spring and deficient in moisture during much of the growing season.

Soil: Most of the soils are *Sols Bruns Acides*—moderately deep to deep, somewhat stony, medium-textured, moderately to somewhat poorly drained, acid soils with fragipans (Mardin, Volusia, and Morris) on the nearly level to moderately sloping till-mantled uplands; shallower and more stony soils (Lordstown and Oquaga) on the steeper slopes; and deep loamy well-drained soils (Chenango) from outwash in valleys. *Alluvial soils* (Tioga, Chagrin, Genesee, and Barbour) are in the younger stream deposits on valley floors. *Podzols* at higher elevations (Catskill) and *Gray-Brown Podzolic soils* from limy outwash materials (Howard and Palmyra) are conspicuous locally but of small total extent.





5AA-185

EHF-5AA-171

EHF-5AA-219

EHF-5AA-147

EHF-7AA-2

5AA-184

EHF-5AA-172

EHF-5AA-220

EHF-5AA-148

EHF-7AA-2

5AA-183

EHF-5AA-173

EHF-5AA-221

EHF-5AA-145

EHF-7AA-22

5AA-182

EHF-5AA-173

EHF-5AA-221

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EHF-7AA-21

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6-26-60-10:32 EHF-5AA-175

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EHF-5AA-174

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EHF-5AA-144

EHF-7AA-21

EHF-5AA-179

EHF-7AA-178

EHF-5AA-224

EHF-5AA-132

EHF-7AA-20

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EHF-7AA-16

Land Resource Area 141
Lewis Co., N.Y. June 1960.
Index Sheet 4 of 9. ASCS. 1:63,360.

EHF-5AA-98

EHF-5AA-138

EHF-7AA-15

141—Tughill Plateau

New York

1,500 square miles

Land Use: Nearly 90 percent of the area is in farms or other private holdings; the remainder is Federally owned or urban or in other uses. More than one-half of the area is in forest, mainly of northern hardwoods; spruce and balsam grow at higher elevations and on some wet sites. Part of the forested land is abandoned farmland that has been reforested and additional land is now being reforested. Lumber, pulpwood, and maple sirup are the principal forest products. Less than one-tenth of the area is cropland. Forage and some feed grains for dairy cattle are the major crops. Slightly less than one-tenth of the area is in pasture.

Elevation and Topography: 1,000 feet along the lower margins to 2,000 feet at the plateau top. This level to gently sloping sandstone plateau has hilly to steep margins. Local relief is mainly in a few feet to a few tens of feet, but the bordering lowlands are several hundred feet below the plateau top.

Climate: *Average annual precipitation*—35 to 40 inches; evenly distributed; precipitation from late autumn to early spring is mainly snow and as much as 140 inches falls in some places. *Average annual temperature*—40° to 45° F. *Average freeze-free period*—120 to 140 days.

Water: Ground water, perennial streams, and rainfall provide an abundance of water. Shallow and deep wells provide water for domestic and livestock use. The water resources available in perennial streams are little used at present.

Soil: *Podzols* from acid glacial till (Worth, Empeyville, Pinckney, Camroden, and Westbury) are the dominant soils. Most of them have a slowly permeable lower subsoil (fragipan), and all are stony to some extent. *Low-Humic Gley soils* (Dannemora) are extensive on poorly drained flats and in depressions and *Bog soils* are in the wettest depressions.





Land Resource Area 142
St. Lawrence Co., N.Y. May 1962.
Index Sheet 5 of 9. P. ASCS. 1: 63,360.

142—St. Lawrence-Champlain Plain

New York and Vermont

7,000 square miles

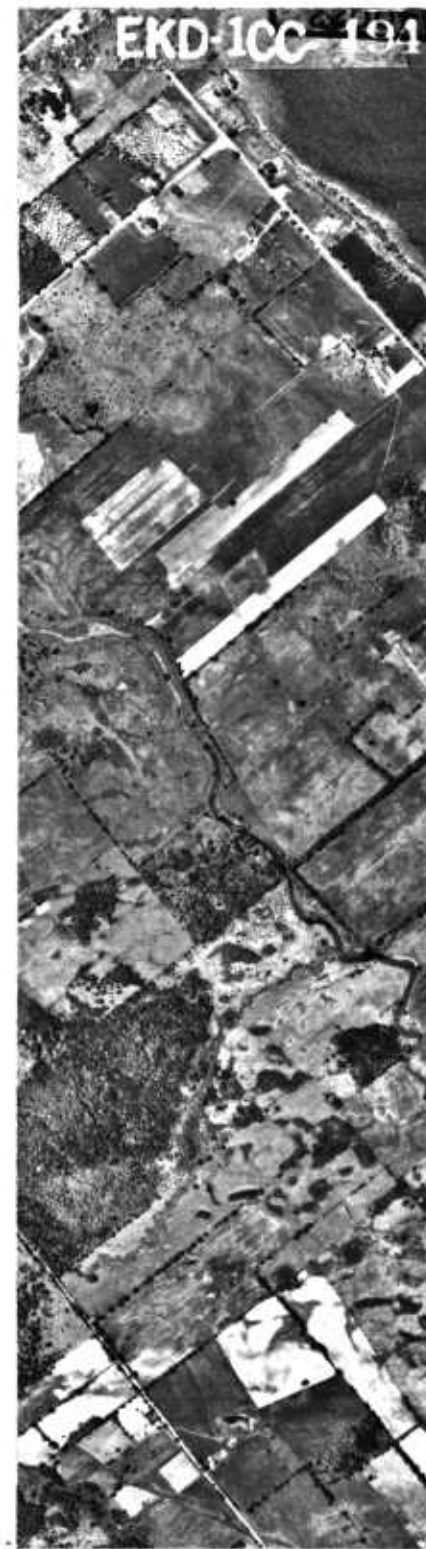
Land Use: Nearly all the area is in farms, but about 5 percent is urban or in other uses. About 70 percent is evenly divided between cropland and pasture. Hay meadows occupy by far the largest acreage, but some oats are grown as well as corn for silage. Grain, hay, and silage are fed to dairy cattle. Potatoes are an important cash crop and a few large apple orchards are on the slopes along Lake Champlain, but the total acreage in these crops is small. Most pastures are mixtures of tame and native grasses and shrubs and have a low carrying capacity. About one-fourth of the area is in forest. Native hardwoods grow on the better drained sites and conifers on most of the wet sites. Gray birch is the dominant tree on cutover land and on abandoned farmland with very sandy soils. Lumber is the main forest product, and cedar oil, Christmas trees, and maple sirup are produced on some farms.

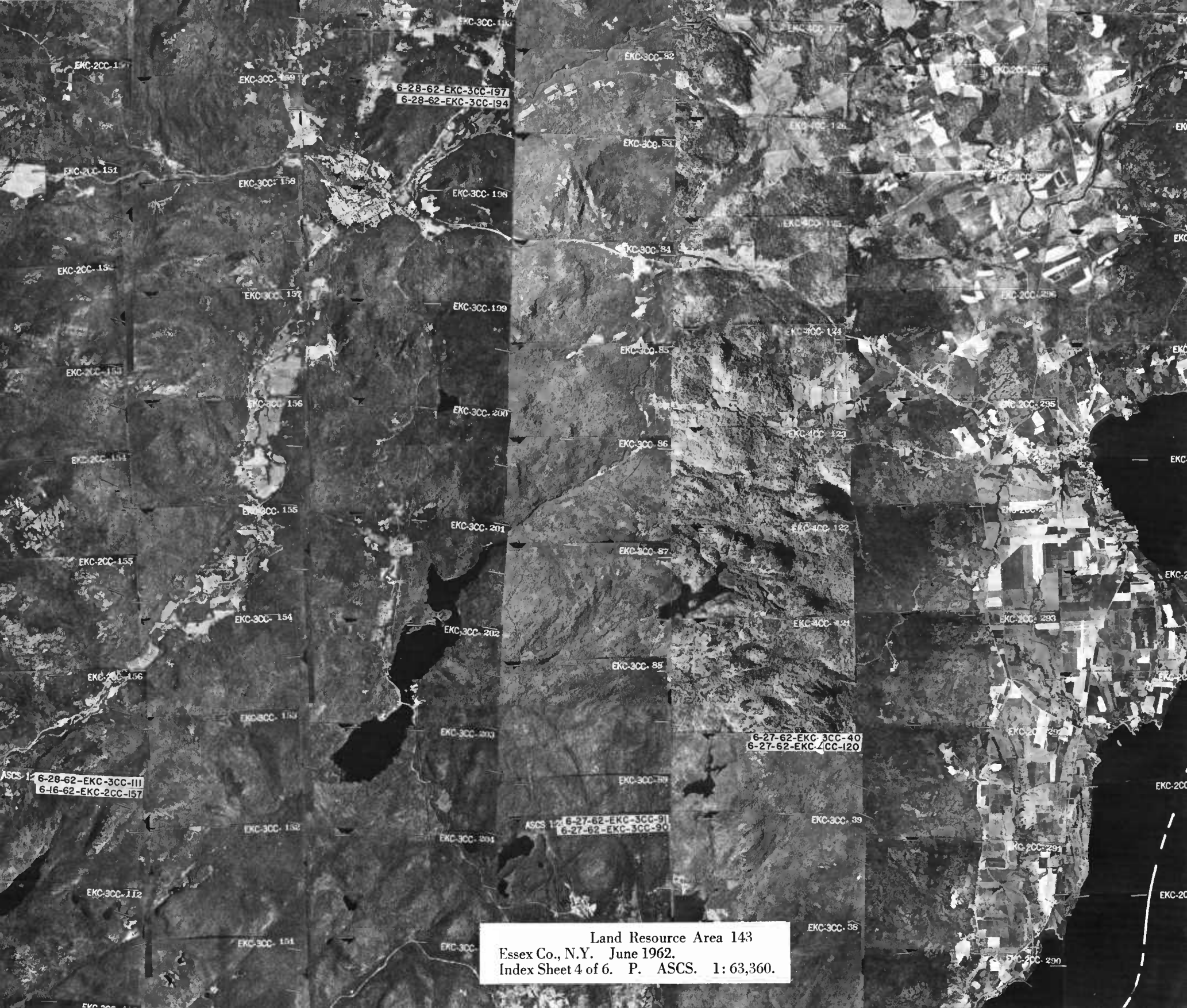
Elevation and Topography: 100 feet to 1,300 feet, increasing gradually from the St. Lawrence River southward and from Lake Champlain to both the east and west. A few large rivers have cut deep but very narrow valleys across this smooth lacustrine and glacial plain. Local relief is mainly in only a few feet, but some outwash terraces rise sharply several tens of feet above the adjacent plains.

Climate: *Average annual precipitation*—About 35 inches; evenly distributed through the year; snowfall is heavy from late autumn to early spring. *Average annual temperature*—40° to 45° F. *Average freeze-free period*—120 to 140 days but 160 days in a narrow belt along Lake Champlain.

Water: Rainfall, many perennial streams, and ground water provide an abundance of water over most of the area. Although shallow wells are undependable, deep wells in glacial drift yield large amounts of water. The ground water in areas underlain by limestone is highly mineralized. The St. Lawrence Seaway, which is the northern border in New York, and Lake Champlain in the east are important transportation arteries and are used extensively for recreation.

Soil: *Low-Humic Gley soils* (Panton, Swanton, and Coveytown) and *Humic Gley soils* (Livingston and Cook) in fine- to coarse-textured lacustrine and marine sediments are dominant at the lowest elevations. Associated with them on narrow low ridges of highly calcareous glacial till are *Brown Forest soils* (Grenville and Nellis) and *Podzols* (Empeyville, Worth, Moira, Westbury, and Adams) on the higher till plains and outwash plains underlain by acid drift derived largely from sandstone. The extensive rock outcrops on low hills are a prominent feature in the west.





6-28-62-EKC-3CC-197
6-28-62-EKC-3CC-194

6-27-62-EKC-3CC-40
6-27-62-EKC-2CC-120

ASCS 1: 6-28-62-EKC-3CC-111
6-16-62-EKC-2CC-157

ASCS 1: 6-27-62-EKC-3CC-91
6-27-62-EKC-3CC-90

Land Resource Area 143
Essex Co., N.Y. June 1962.
Index Sheet 4 of 6. P. ASCS. 1: 63,360.

143—Northeastern Mountains

New York, Maine, New Hampshire, Vermont, and Massachusetts
36,900 square miles

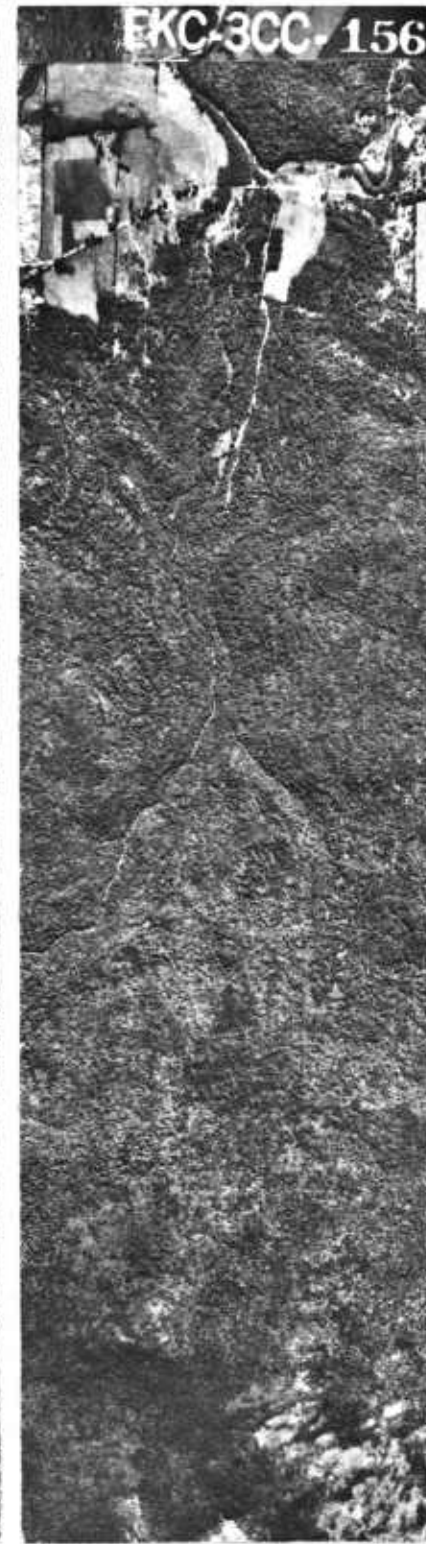
Land Use: More than 90 percent of the area is in forest of northern hardwoods, spruce, and fir. Most of the Adirondacks are in a State park. A few fairly large areas in New England are in National and State forests, but much of the area is privately owned. Lumbering is important except in the Adirondacks. Christmas trees and maple sirup are other forest products. The area is widely used for recreation and there are many summer and winter resorts. Less than 5 percent of the area is cropland or in pasture. Farming is a part-time enterprise and most farm operators earn a major part of their living at other occupations.

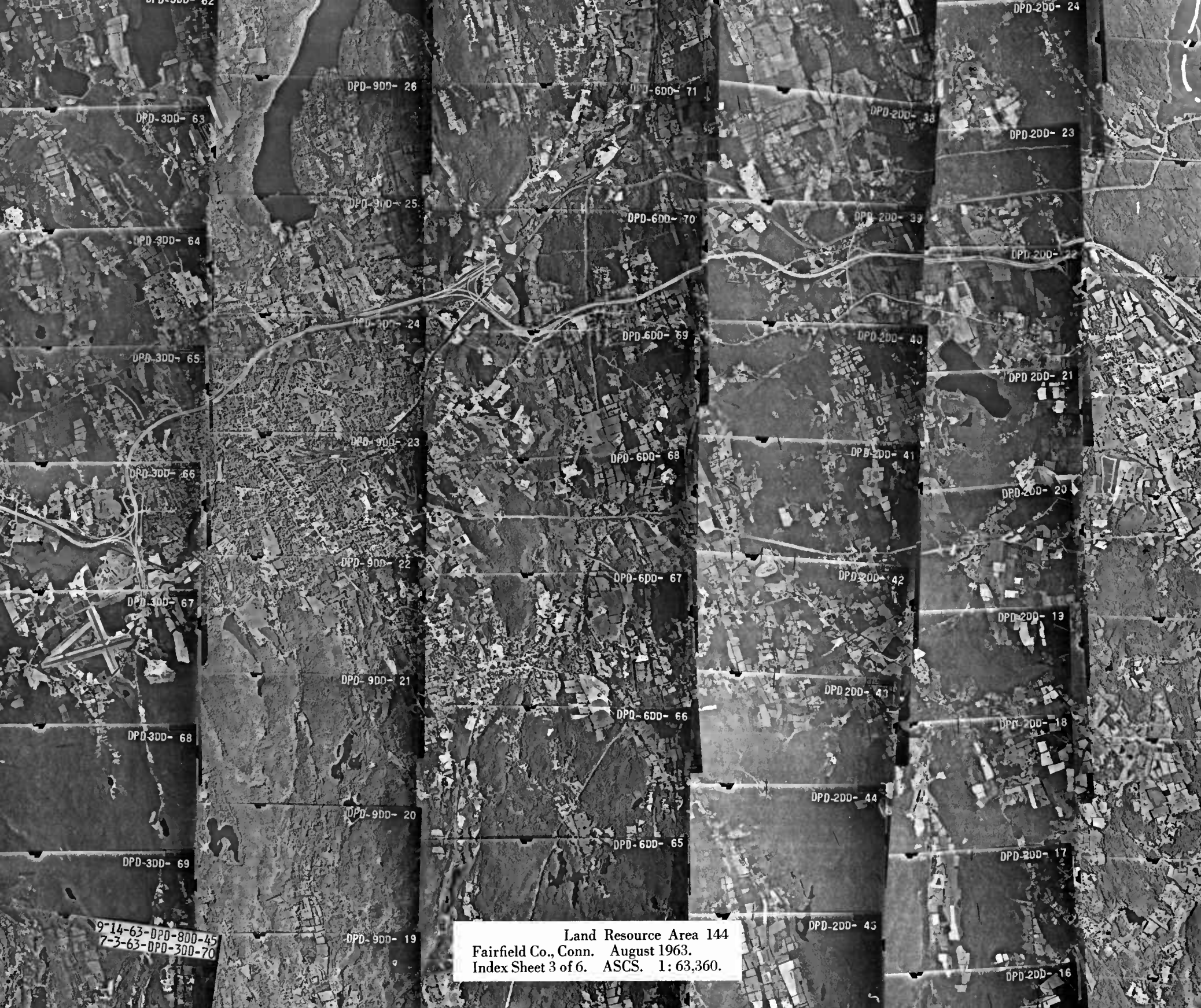
Elevation and Topography: 1,000 to 4,000 feet, a few isolated peaks more than 5,000 feet. Rounded mountains are underlain by granite, anorthosite, schists, and slate and are thinly mantled by glacial till. Many glacially broadened valleys are deeply filled with outwash and contain many swamps and lakes. Mountain slopes are strongly rolling to steep but valley floors are level. Local relief ranges from 100 to 200 feet on the lower foot slopes to more than 1,000 feet in the central mountain masses.

Climate: *Average annual precipitation*—35 to 50 inches, highest in the Adirondacks; evenly distributed through the year although slightly lower in midwinter; heavy snowfalls are common in winter. *Average annual temperature*—Less than 40° F. in northern Maine, 40° to 45° F. elsewhere. *Average freeze-free period*—Mostly less than 120 days but as long as 140 days in the foothills.

Water: Rainfall, perennial streams, and lakes provide an abundance of water. Ground water is abundant in deep outwash in valleys but is scarce in the till-mantled uplands. The many lakes provide extensive recreational facilities.

Soil: *Podzols* are the dominant soils (Hermon, Becket, and Canaan in glacial till from granite rocks; Plaisted, Thorndike, Lyman, Berkshire, and Marlow in till from slates and schists; and Adams, Au Gres, Allagash, Colton, and Duane from acid sandy and gravelly outwash). Many of the soils from glacial till are stony, and rough stony land or rockland on the steepest mountain slopes occupy 5 to 10 percent of the area. Peat is extensive in the wet lowlands as are *Humic Gley soils* (Whitman and Scarboro) in many places.





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DPD-900- 26

DPD-600- 71

DPD-300- 63

DPD-200- 33

DPD-200- 23

DPD-900- 25

DPD-600- 70

DPD-200- 39

DPD-300- 64

DPD-200-

DPD-900- 24

DPD-600- 69

DPD-200- 40

DPD-300- 65

DPD-200- 21

DPD-900- 23

DPD-600- 68

DPD-200- 41

DPD-300- 66

DPD-200- 20

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DPD-200- 19

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DPD-600- 66

DPD-200- 43

DPD-300- 68

DPD-200- 18

DPD-900- 20

DPD-600- 65

DPD-200- 44

DPD-300- 69

DPD-200- 17

DPD-900- 19

DPD-200- 45

9-14-63-DPD-800-45
7-3-63-DPD-300-70

Land Resource Area 144
Fairfield Co., Conn. August 1963.
Index Sheet 3 of 6. ASCS. 1: 63,360.

DPD-200- 16

144—New England and Eastern New York Upland

Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, and New Jersey
38,100 square miles

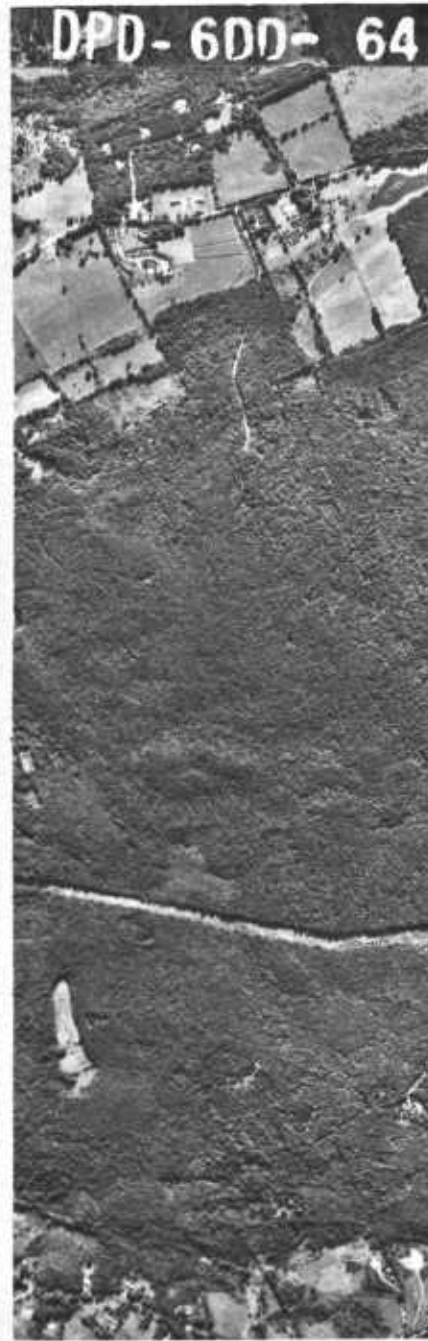
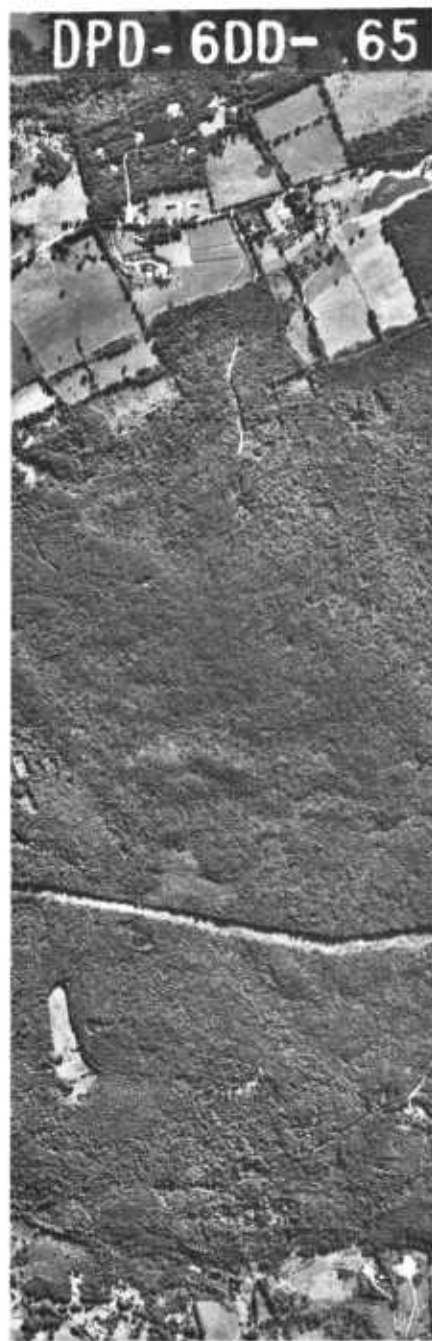
Land Use: About two-thirds of the area is in forest, mainly of hardwoods and white pine and, in the north, some fir and spruce. Most of the forest is in small holdings in farm woodlots, but some is in State forests or other large holdings. Lumber is the principal product and maple sirup and Christmas trees are produced on some farms. The woodland of this area is used widely for hunting and other recreation. About one-fifth of the area is in crops and pastures; the amount of land in crops is somewhat greater than that in pasture. Most of the cropland is in forage crops for dairy cattle. Potatoes, other vegetables, and apples are grown on some farms, mainly near the larger towns and cities. Much of the farming is on a part-time basis. Many farmsteads are used as rural residences and the occupants earn their living from nonfarm occupations. About one-tenth of the area is urban and the amount is increasing rapidly, especially in the south.

Elevation and Topography: Sea level to 1,000 feet over much of the area, some hills 2,000 feet, and a few isolated peaks 3,000 feet. The till-mantled rolling to hilly uplands are broken by many level to gently sloping valleys that terminate in coastal lowlands. These valleys and coastal plains are covered by glacio-lacustrine and marine sediments and outwash. Relief is mostly in a few feet to a few tens of feet in the valleys and in several tens of feet to a few hundred feet in the uplands.

Climate: *Average annual precipitation*—40 to 45 inches, decreasing to 35 inches in the northwest; evenly distributed through the year except slightly lower in spring and summer near the coast and slightly higher in spring and summer inland. *Average annual temperature*—40° to 50° F., increasing from north to south. *Average freeze-free period*—120 to 160 days, increasing from north to south; 180 days or more in a narrow belt along the coast in Massachusetts and southward.

Water: The abundant rainfall, many perennial streams, and many natural lakes and ponds are the important water sources. Many large and small reservoirs provide municipal and industrial water supplies. Ground water is scarce in the till-mantled uplands but is abundant in the deep outwash deposits in the valleys.

Soil: This area has a complex soil pattern. *Podzols* (Hermon, Becket, Bangor, Colton, and Adams) are dominant on the higher hills that have a thin till mantle and the associated areas of sandy glacial outwash in northern New England. On lower areas in



northern New England and in much of southern New England, where the parent materials are deeper drift and lacustrine sediments, *Brown Podzolic soils* (Charlton, Gloucester, Paxton, Hollis, Merrimac, Hinckley, Suffield, Buxton, and Agawam) are dominant. In the uplands bordering the Hudson Valley of New York, *Sols Bruns Acides* (Nassau, Troy, Cossayuna, Stockbridge, Rockaway, and Chatfield)

are most extensive. *Brown Forest soils* (Nellis, Dover, Benson, and Amenia) in highly calcareous shallow till underlain by limestone are conspicuous locally but are of small total extent. *Alluvial soils* (Ondawa, Podunk, Hadley, and Winooski) on narrow flood plains are highly important to agriculture even though their total acreage is small.



Land Resource Area 145
Hampshire Co., Mass. September 1958.
Index Sheet 2 of 5. ASCS. 1: 63,360.

145—Connecticut Valley

Connecticut and Massachusetts
1,700 square miles

Land Use: About four-fifths of the area is in farms; most of the remainder is urban or in built-up areas. About one-fourth of the land is cleared and used for crops but some is in pasture. Tobacco, vegetables, potatoes, fruits, and nursery stock are major crops. Forage crops for dairy cattle occupy a substantial acreage on many farms. Poultry farming is also important in some places. About one-half of the area is in forest of hardwoods and white pine, mainly in farm woodlots. Firewood and fence posts are the principal forest products, and some lumber is produced. Maple sirup and Christmas trees are important forest products on a few farms.

Elevation and Topography: Sea level to 300 feet in lowlands, ridge crests 500 to 1,000 feet. Nearly level to sloping lowlands mantled by glacio-lacustrine and marine sediments, glacial till, and outwash are broken by isolated north-south-trending traprock ridges that have hilly and steep slopes. Lowlands have local relief of a few feet to a few tens of feet; the ridges are several hundred feet above the lowlands.

Climate: *Average annual precipitation*—About 45 inches; fairly evenly distributed through the year except slightly higher in spring and summer. *Average annual temperature*—45° to 50° F. *Average freeze-free period*—160 to 180 days.

Water: Rainfall, perennial streams, and ground water provide an abundance of water. Water for municipal and industrial needs is stored in reservoirs in this area and in adjoining areas.

Soil: *Brown Podzolic soils* (Buxton, Hartland, and Whippany in glacio-lacustrine or marine sediments; Agawam, Merrimac, Enfield, and Hinckley from outwash; Cheshire and Wethersfield from red glacial till; and Holyoke from traprock) are dominant. *Alluvial soils* (Hadley, Winooski, and Ondawa) on narrow flood plains and *Low-Humic Gley soils* (Scantic) in glacio-lacustrine or marine sediments are the other principal soils and are widely used for agriculture.





Land Resource Area 146
Aroostook Co., Maine. September 1962.
Index Sheet 7 of 14. P. ASCS. 1: 63,360.

146—Aroostook Area

Maine
2,500 square miles

Land Use: Nearly all the land is in farms and between one-half and three-fourths is cleared and in crops. Potatoes are the major crop, but some land is in oats and hay meadow in support of dairying. Most of the remaining part is in farm woodlots. Firewood and fence posts are the principal forest products; some lumber, maple sirup, and Christmas trees are produced.

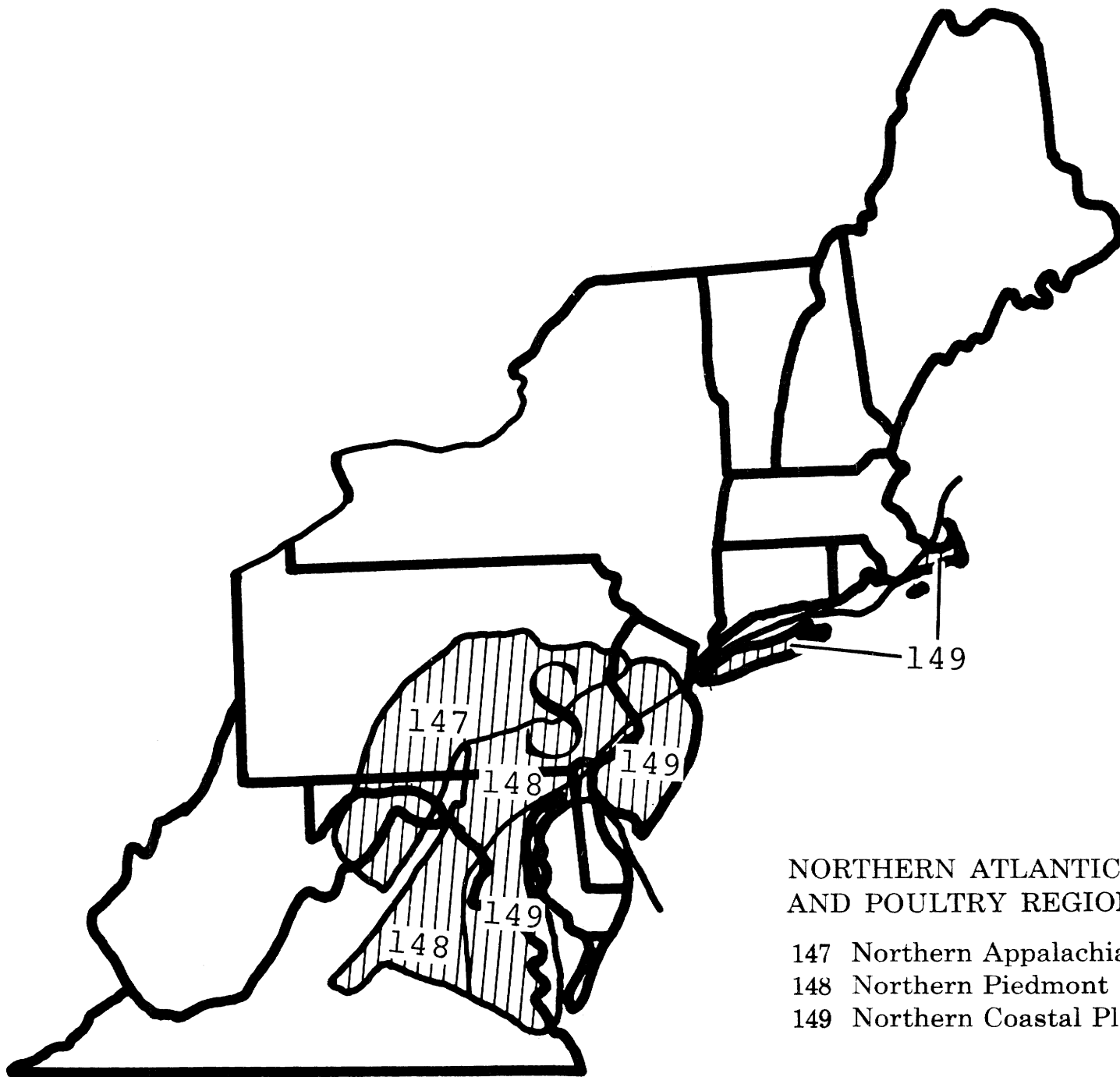
Elevation and Topography: 300 to 500 feet, a few hills 1,000 feet. This is a nearly level to rolling glaciated plain cut by narrow valleys. Thin to thick till mantles the uplands, and the valleys are deeply filled with outwash and alluvium. Local relief is in a few feet to a few tens of feet.

Climate: *Average annual precipitation*—36 to 40 inches; fairly evenly distributed through the year; snowfall is heavy in winter. *Average annual temperature*—37° to 41° F. *Average freeze-free period*—110 to 125 days.

Water: Rainfall and the many perennial streams provide an abundance of water. Ground water is plentiful in the outwash and alluvium in the valleys but is scarce in the till and bedrock in the uplands.

Soil: *Podzols* are dominant throughout the area (Thorndike and Mapleton, shallow soils over acid and calcareous bedrock; Caribou from glacial till over limestone; Plaisted and Howland from mixed or acid rocks; and Allagash and Stetson from outwash). *Low-Humic Gley soils* (Monarda and Easton) are the major soils on the associated wet areas. *Alluvial soils* (Hadley and Winooski) on flood plains are highly important to agriculture but their total area is small.





NORTHERN ATLANTIC SLOPE TRUCK, FRUIT,
AND POULTRY REGION

- 147 Northern Appalachian Ridges and Valleys
- 148 Northern Piedmont
- 149 Northern Coastal Plain

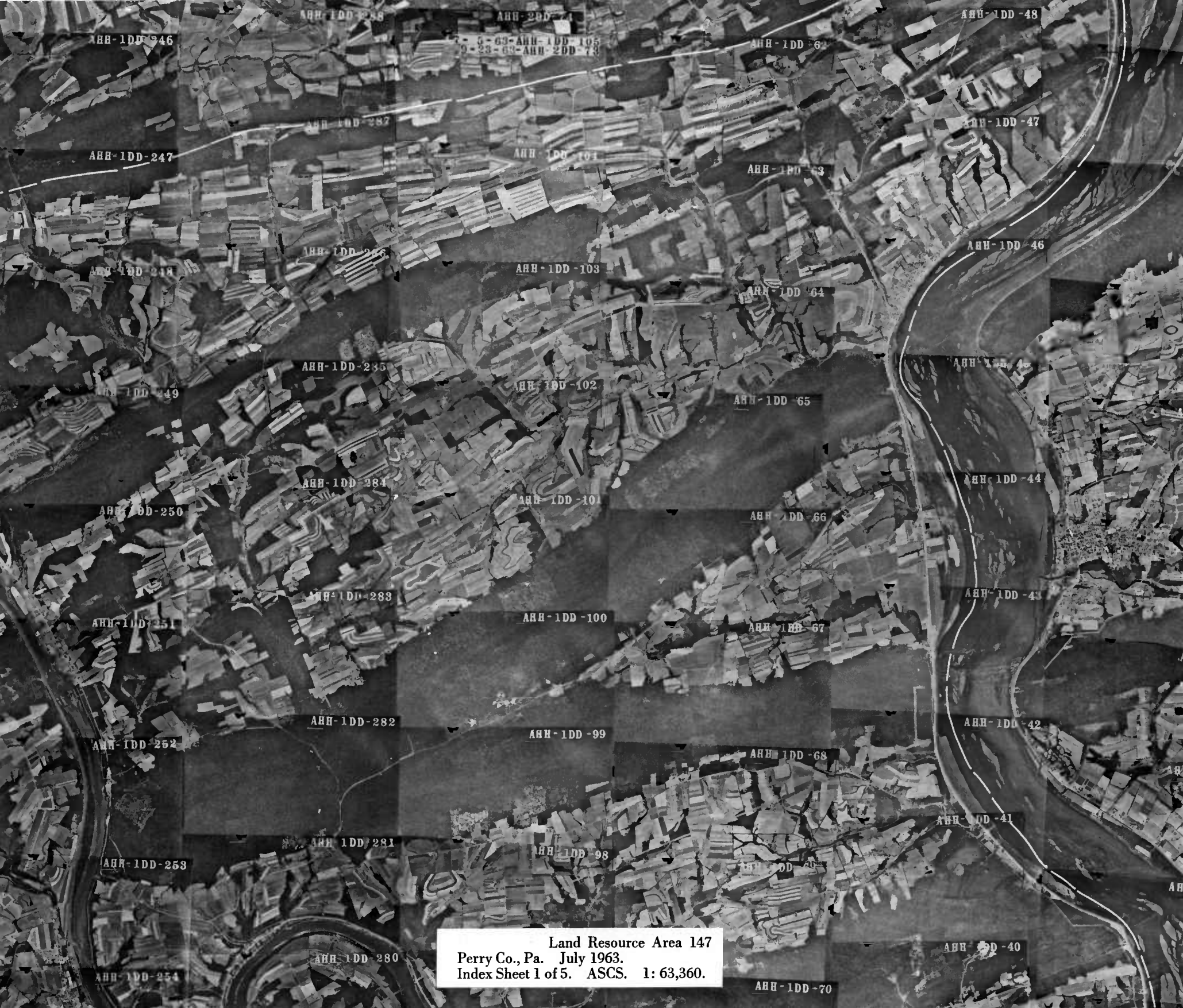
S—NORTHERN ATLANTIC SLOPE TRUCK, FRUIT, AND POULTRY REGION

44,100 square miles

This region consists of three resource areas—gently to steeply sloping Northern Coastal Plain, Northern Piedmont, and Northern Appalachian Ridges and Valleys. The average annual precipitation is 40 to 50 inches over most of the region but only 32 to 36 inches in the ridges and valleys in western Maryland and West Virginia. Precipitation is slightly higher in midsummer than during the remainder of the year. Average annual temperatures are 50° to 57° F. The freeze-free season ranges from 140 days in the mountains to 210 days along the shore of the Chesapeake Bay but is 180 to 200 days in much of the region.

Soils on the steep slopes are mainly Sols Bruns Acides. On the gentle slopes Red-Yellow Podzolic soils are dominant but some soils, mainly on limestone materials, are in the Gray-Brown Podzolic group.

Poultry and dairy farming are the leading agricultural enterprises in the region; fruit and truck crops are also important in many places. Many farms are operated on a part-time basis by people who earn most of their living in the cities, and rural residences occupy some areas where the land is less favorable for farming. The encroachment of urban areas on farmland is a problem throughout the region. Steep slopes are largely in forests, which are used for both timber production and recreation.



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AHH-1DD-248

AHH-2DD-74

AHH-1DD-48

6-69-AHH-1DD-105
9-28-69-AHH-2DD-73

AHH-1DD-6

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AHH-1DD-253

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AHH-1DD-69

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AHH-1DD-40

AHH-1DD-254

AHH-1DD-70

Land Resource Area 147
Perry Co., Pa. July 1963.
Index Sheet 1 of 5. ASCS. 1: 63,360.

147—Northern Appalachian Ridges and Valleys

Pennsylvania, Maryland, West Virginia, and Virginia
15,700 square miles

Land Use: Most of the area is in farms, about 5 percent is urban, and an additional 10 percent is in other uses. Between one-fourth and one-third is cropland. The wide variety of agricultural enterprises and crops is characteristic of the area. On many farms forage and feed grains for dairy cattle are the principal crops; tobacco, apple orchards, and truck and canning crops are also important throughout the area. Poultry farming is important, especially in the north. Less than 10 percent of the area is in permanent pasture. About one-half is in hardwood forest, mainly in small to medium-sized holdings and some in State and National forests and parks.

Elevation and Topography: 400 to 1,000 feet in valleys and 1,200 to 2,500 feet on ridges and mountains, some mountain crests 3,000 feet. Parallel sandstone and shale ridges are separated by narrow to moderately broad limestone and shale valleys. Ridges have hilly to steep slopes and narrow rolling crests; valleys are mainly undulating to rolling but are hilly locally. Local relief in the valleys is in several tens of feet to 100 or 200 feet; ridges rise several hundred feet above adjoining valleys.

Climate: *Average annual precipitation*—32 to 45 inches; highest in spring and summer and least in autumn. *Average annual temperature*—50° to 55° F. *Average freeze-free period*—140 to 180 days.

Water: The favorably distributed abundant rainfall is adequate for crops in most years, but summer droughts reduce yields in some years. Springs and shallow wells are the principal sources of water for domestic and livestock use in the limestone valleys, but ground water is scarce in areas underlain by shale and sandstone. Recently small ponds have become an important source of water on many farms. Many small and large perennial streams are potential water sources that are not much used at present.

Soil: Soil patterns in this area are complex. *Red-Yellow Podzolic soils* (Duffield, Frederick, Franks-town, and Dunmore from limestone; Murrill and Laidig in colluvium; and Allenwood and Drifton from old glacial drift in the north) are dominant in most of the less sloping valleys. *Reddish-Brown Lateritic soils* having some features of *Gray-Brown Podzolic soils* and also formed in limestone materials (Hagerstown) are extensive soils important to agri-



culture. *Gray-Brown Podzolic soils* (Edom and Corydon from limestone residuum and Washington from old glacial drift) are important locally but of small total extent. On the slopes of ridges underlain by acid sandstone and shale *Sols Bruns Acides*

(Dekalb, Calvin, Lehew, and Berks) are most extensive and *Lithosols* (Montevallo) are also important. *Alluvial soils* (Huntington, Lindside, Pope, and Philo) on flood plains are among the most important soils for crops but their total acreage is small.



Land Resource Area 148
Lancaster Co., Pa. May 1964.
Index Sheet 4 of 7. ASCS. 1: 63,360.

5-23-64-AHG-5EE-39

148—Northern Piedmont

Pennsylvania, Maryland, Virginia, New Jersey, and Delaware
15,200 square miles

Land Use: More than four-fifths of the area is in farms, one-tenth is urban, and the remainder is in other uses. Slightly more than one-third of the entire area is cropland, but the proportion of cropland is somewhat higher in Pennsylvania and lower in Virginia. Forage crops and grain for dairy cattle occupy by far the largest acreage of cropland, but tobacco, canning and truck crops, and orchards are grown under high management levels on many of the better soils. Poultry farming is important in places. About one-eighth of the area is in pasture and one-third in forest, mainly in farm woodlots but some in large holdings.

Elevation and Topography: 300 to 1,000 feet, some ridges and isolated peaks 1,500 feet or more. This dissected plain or plateau underlain mainly by gneisses, schists, and related rocks is broken by narrow ridges that are underlain by traprock and by Triassic lowlands that are underlain by sandstones, shales, and limestones. Topography is mainly gently to strongly rolling and local relief is in a few tens of feet to 100 or 200 feet.

Climate: *Average annual precipitation*—40 to 45 inches; highest in spring and late summer and least in autumn. *Average annual temperature*—50° to 57° F. *Average freeze-free period*—160 to 200 days.

Water: The abundant rainfall and many perennial streams are important water sources. Shallow wells, cisterns, and a few springs are the major water sources on farms; recently small ponds have been built on many farms. Ground-water supplies are small in areas underlain by crystalline rocks but are somewhat larger in limestone and sandstone areas. Reservoirs on the larger streams are the principal sources of water for municipal and industrial uses in the large urban centers.

Soil: *Red-Yellow Podzolic soils* (Elioak, Nason, Tatum, and Eubanks) from schists and gneisses are dominant in the south; Duffield in limestone basins is extensive, mainly in Maryland and Pennsylvania. Associated with them are *Reddish-Brown Lateritic soils* having some properties of *Gray-Brown Podzolic soils* (Hagerstown). In the north soils having characteristics intermediate between *Red-Yellow Podzolic soils* and *Gray-Brown Podzolic soils* are most extensive (Chester,



Glenelg, and Glenville from schists; Bucks, Penn, and Readington from Triassic sandstones and shales; Edgemont from quartzite; and Montalto from traprock). On hills and steep slopes *Sols Bruns Acides* (Manor, Brandywine, Louisburg, and Lewisberry)

and *Lithosols* (Klinesville) are the major soils. Of small total extent but conspicuous locally are *Planosols* (Iredell and Croton) on wet flats or foot slopes and *Reddish-Brown Lateritic soils* (Davidson) on narrow traprock ridges in the south.



Land Resource Area 149
Cumberland Co., N.J. May 1963.
Index Sheet 2 of 4. ASCS. 1:63,360.

CMW-3DD-120

38-CND-3DD-277

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CMW-3DD-235

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CMW-3DD-175

CMW-3DD-153

CMW-3DD-112

CMW-3DD-220

CMW-3DD-174

149—Northern Coastal Plain

New Jersey, Maryland, Virginia, New York, Massachusetts,
and Delaware
13,200 square miles

Land Use: About three-fourths of the area is in farms, one-tenth is urban, and the remainder is in other uses. Recently the amount of urban land has increased rapidly. A narrow band along the coast in New Jersey and States to the north is intensively developed for resorts and recreation. Nearly three-fifths is in forest, mainly in farm woodlots but partly in large holdings. Lumber and some pulpwood are the principal forest products. About one-fifth is in crops, mainly cash crops, and less than 5 percent is in pasture. Fruits, vegetables, tobacco, corn, soybeans, and small grains are the major crops. Forage crops and grain for dairy cattle are important on some farms. Poultry farming is a major enterprise in some places.

Elevation and Topography: Sea level to 300 feet but less than 200 feet in most of the area. This undulating to rolling dissected coastal plain is underlain by unconsolidated sands, silts, and clays. Local relief is mostly in a few feet to a few tens of feet but is 100 feet or more in a few places.

Climate: *Average annual precipitation*—35 to 50 inches; highest near the coast and in midsummer and late summer. *Average annual temperature*—50° to 55° F. *Average freeze-free period*—170 to 210 days, decreasing from south to north and from the coast inland.

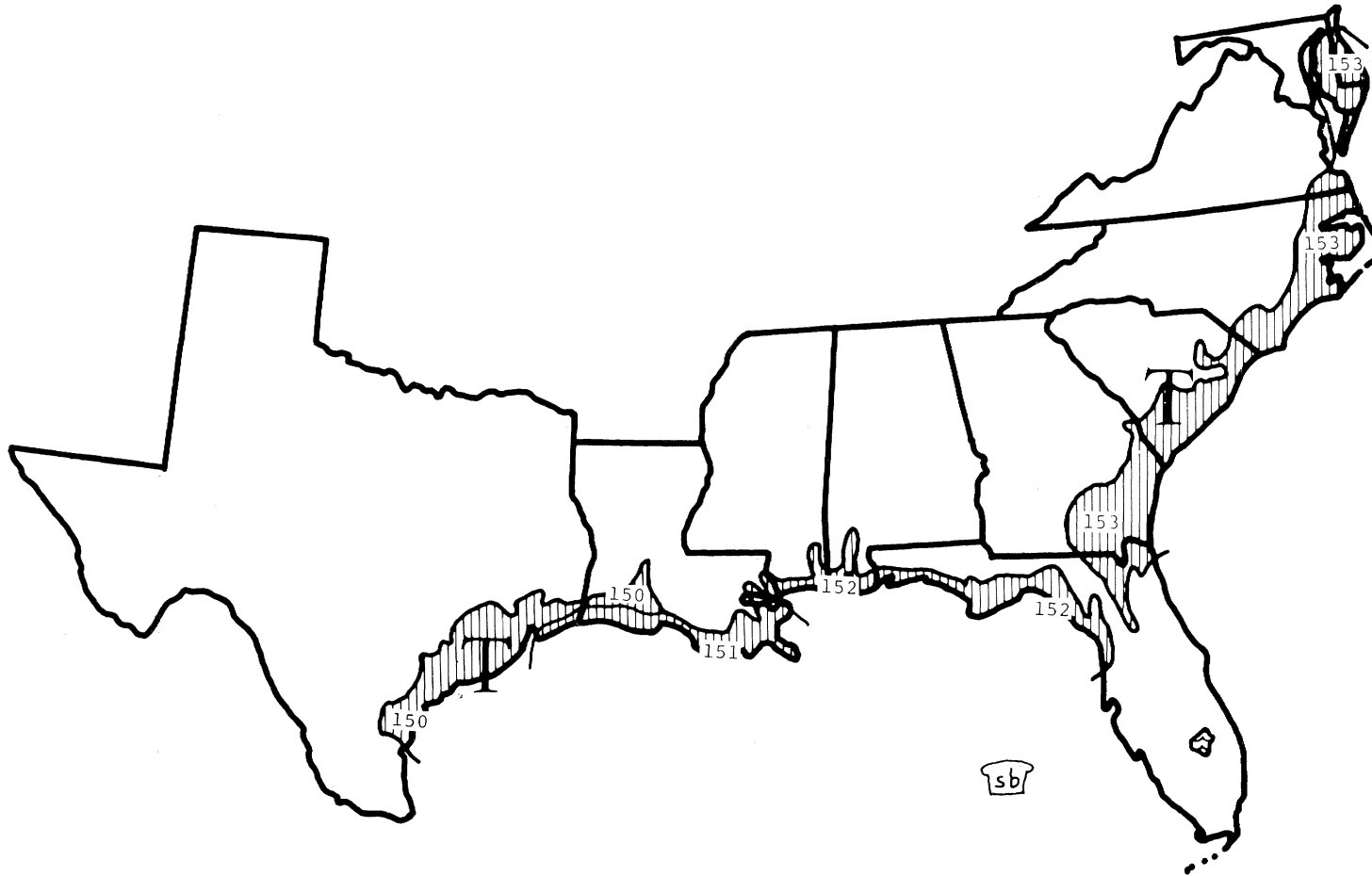
Water: Rainfall, perennial streams, and ground water provide an abundance of water. Domestic supplies are obtained mainly from shallow wells, but large supplies must be obtained from deep wells. In the coarse-textured well-drained soils, moisture is deficient in some years and supplemental irrigation from wells and ponds is used for high-value crops.

Soil: *Red-Yellow Podzolic soils* (Beltsville, Aura, Keyport, Sunnyside, Caroline, Christiana, and Kempsville) on the higher gently sloping to rolling uplands are the dominant soils over much of the area. Several of these soils have a strongly expressed fragipan. In lower areas soils having properties intermediate between those of *Gray-Brown Podzolic soils* and *Red-Yellow Podzolic soils* (Sassafras, Matapeake, Mattapex, and Woodstown) are most extensive. On associated wet lowlands are *Low-Humic Gley soils* (Othello, Elkton, and Fallsington). *Regosols* (Evesboro and Galestown) are in deep sands of undulating to rolling old dunes and beaches and *Sols Bruns Acides* (Croom) in gravel of rolling to hilly old beaches and terraces. *Gray-Brown Podzolic soils* having some



properties of *Red-Yellow Podzolic soils* (Collington, Monmouth, and Adelphia) are the principal soils in glauconitic sands in Maryland and New Jersey. *Podzols* (Lakewood and Lakehurst) are in rapidly drained deep acid sands in New Jersey and *Ground-*

Water Podzols (Leon and St. Johns) on associated wet lowlands. *Bog soils* occur on small to medium-sized flats in New Jersey, and tidal marsh of unclassified organic and mineral soils is in relatively narrow bands bordering all coasts.



ATLANTIC AND GULF COAST LOWLAND FOREST
AND TRUCK CROP REGION

- 150 Gulf Coast Prairies
- 151 Gulf Coast Marsh
- 152 Gulf Coast Flatwoods
- 153 Atlantic Coast Flatwoods

**T—ATLANTIC AND GULF COAST LOWLANDS FOREST
AND TRUCK CROP REGION**

77,200 square miles

This region consists of the nearly level low parts of the Atlantic and Gulf Coastal Plains.

The annual precipitation is 40 to 60 inches over most of the region but decreases sharply to about 25 inches in the extreme western part. The Mississippi River Delta, however, receives as much as 65 inches. Average annual temperatures are 65° to 70° over much of the region but decrease to 55° F. in the north. The freeze-free season ranges from 200 days in the north to 320 days in the south.

Low-Humic Gley soils, Ground-Water Podzols, and Bog soils are dominant along the Atlantic and Gulf coasts east of the Mississippi River Delta. West of the delta, Grumusols and Planosols are the principal soil groups.

Most of the soils are too wet to be used for crops without artificial drainage. Drained areas are used mainly for truck crops and cotton and to some extent for improved pastures. Sugarcane and rice are important crops in Louisiana and east Texas. Undrained areas to the east of the Mississippi River Delta remain in forest.



Land Resource Area 150
Jefferson Davis Parish, La. March 1962.
Index Sheet 1 of 4. ASCS. 1: 63,360.

150—Gulf Coast Prairies

Texas and Louisiana
15,900 square miles

Land Use: Nearly all the area is in farms. Rice, cotton, corn, grain sorghum, and alfalfa and other hay are the major crops; a large acreage is in pasture or range of native grasses, tame grasses, and legumes. Bottom-land hardwood forests border several streams that cross the area.

Elevation and Topography: Sea level to about 200 feet along the interior margin. The level low coastal plain has local relief of only a few feet.

Climate: *Average annual precipitation*—25 to 55 inches, increasing from west to east; evenly distributed except somewhat higher in midsummer and late summer. *Average annual temperature*—68° to 70° F. *Average freeze-free period*—280 to 320 days.

Water: The moderate to high rainfall and many perennial streams provide abundant water. Water for irrigating rice is obtained from streams. Ground water is abundant. Much of the land must be drained before it can be successfully used for the general farm crops.

Soil: Dark-colored *Grumusols*, (Beaumont, Lake Charles, and Victoria); *Planosols* (Edna, Crowley, Katy, and Orelia); and *Low-Humic Gley soils* (Midland) all from calcareous clays and marls are the dominant soils. Some *Reddish Prairie soils* (Bernard and Hockley) are on the somewhat better drained sites. *Alluvial soils* (Miller, Yahola, Trinity, and Navasota) occur in broad bands bordering a few of the larger streams. *Regosols* (Galveston) are on dunes and beaches and there are narrow strips of marshland along the coast.





Land Resource Area 151
Cameron Parish, La. April 1957.
Index Sheet 5 of 5. P. ASCS. 1: 63,360.

10-8-57-CJW-8T-155

11-9-57-CJW-9T-75

4-5-57-CJW-7T-138

4-5-57-CJW-7T-134

151—Gulf Coast Marsh

Texas and Louisiana
8,000 square miles

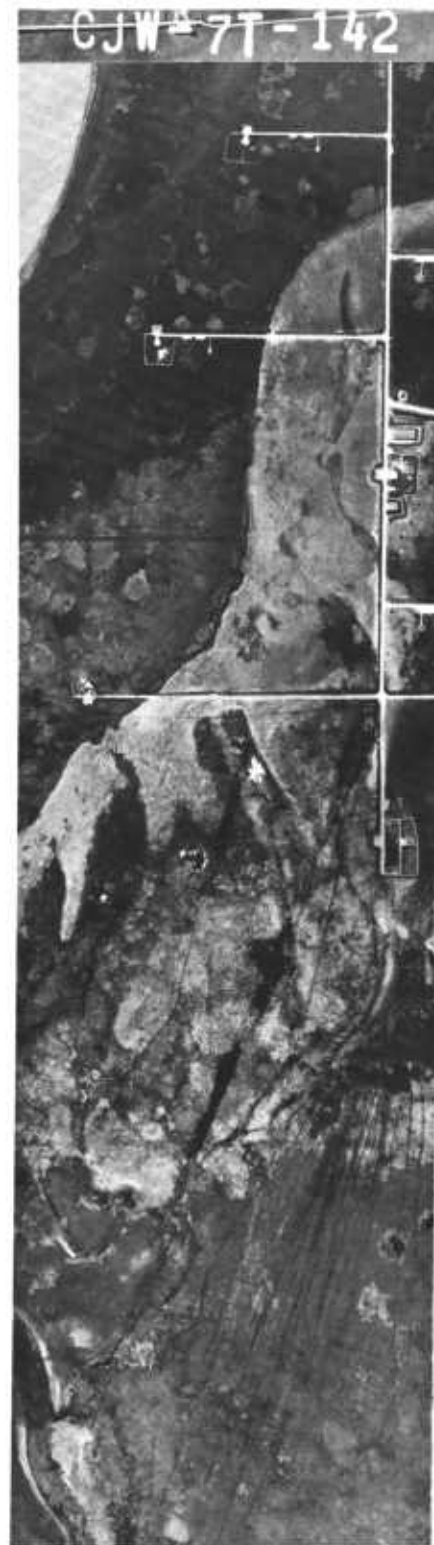
Land Use: Only a small part of the area is in farms and little or none is cropped. The drier parts are grazed seasonally, but hunting, fishing, and trapping are the principal uses. Oil wells and sulfur wells are important in some places. Reeds, cattails, bulrush, fresh-water marsh grasses, and salt grasses occupy most of the area. Mangrove is prominent in places near the coast, and forests of cypress, tupelo gum, and other wetland hardwoods border the area on the landward side.

Elevation and Topography: Sea level to less than 5 feet above sea level. Marshes and swamps are broken by shallow lakes and bayous and are crossed by many stream channels. Except for narrow bands of gentle slopes on natural levees, the area is flat.

Climate: *Average annual precipitation*—55 to 65 inches; highest in midsummer and early autumn and lowest in midautumn. *Average annual temperature*—About 70° F. *Average freeze-free period*—280 days to more than 300 days.

Water: Much of the area is periodically covered either by tide flow or by stream overflow. Flooding and salinity preclude use of most of the area for agriculture.

Soil: Peat deposits mainly from herbaceous plants cover most of the area to a depth of several feet except in the west where clays are predominant. In the swamps along the northern fringe, the peat is largely from woody materials and contains less salt than the peats near the coast. Along stream channels and natural levees, there are narrow bands of recently deposited silts and clays at the surface.





Land Resource Area 152
Taylor Co., Fla. November 1966.
Index Sheet 5 of 5. P. ASCS. 1:63,360.

152—Gulf Coast Flatwoods

Florida, Alabama, and Mississippi
10,500 square miles

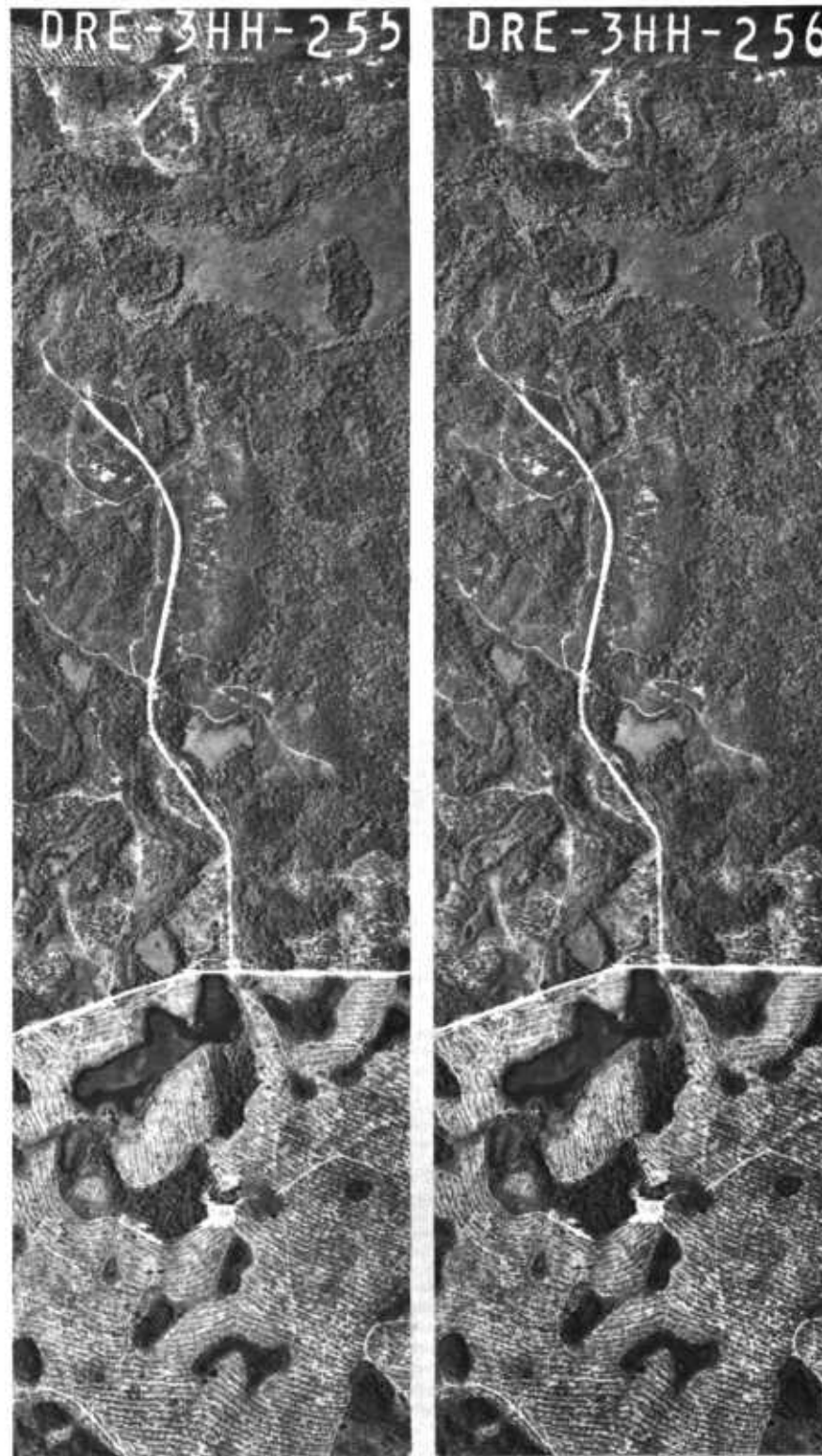
Land Use: Very little of this area is in farms. Much of it is in large holdings owned by pulp and paper companies; part is in State and National forests, game refuges, and military training areas. Nearly nine-tenths of the area is forested; lumber, pulpwood, and naval stores are the principal forest products. Part of the woodland is grazed seasonally. Only 1 or 2 percent of the area is cropped and a like amount is in pasture. Fruits, vegetables, and livestock are produced, mainly for home consumption. Some corn, peanuts, and tobacco are grown for sale.

Elevation and Topography: Sea level to 50 feet and locally to 100 feet. This nearly level low coastal plain is crossed by many large streams. The areas in Florida have many lakes and ponds. Local relief is a few feet to 10 or 20 feet.

Climate: *Average annual precipitation*—52 to 64 inches; lowest in midautumn, increasing moderately in winter through early summer, and highest in mid-summer and early autumn. *Average annual temperature*—67° to 70° F *Average freeze-free period*—270 to 310 days

Water: The abundant rainfall and many perennial streams are important water sources. Ground water is plentiful but is affected by salt in many places near the coast.

Soil: A very large part of the area has soils with restricted drainage. *Humic Gley soils* (Portsmouth, Bayboro, and Pocomoke) and *Ground-Water Podzols* (Leon, Immokalee, and St. Johns) associated in a complex pattern in sandy and clayey sediments and *Low-Humic Gley soils* (Plummer, Bladen, Rains, and Parkwood) are the major soils. *Regosols* (Lakeland, Blanton, and Orlando) on old sand dunes and beach ridges are the other principal soils. Some *Red-Yellow Podzolic soils* (Goldsboro and Lynchburg) are on the better drained uplands. There are narrow bands of beaches and dunes along the coast. Small to fairly large areas of tidal marsh, fresh-water marshes, and swamps border the dunes on the landward side.





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ANH-6AA-36

ANH-4AA-52

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Land Resource Area 153
Sussex Co., Del. November 1961.
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ANH-511-128

ANH-511-127

ANH-511-126

ANH-511-125

ANH-511-124

ANH-511-123

153—Atlantic Coast Flatwoods

Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and Florida
42,800 square miles

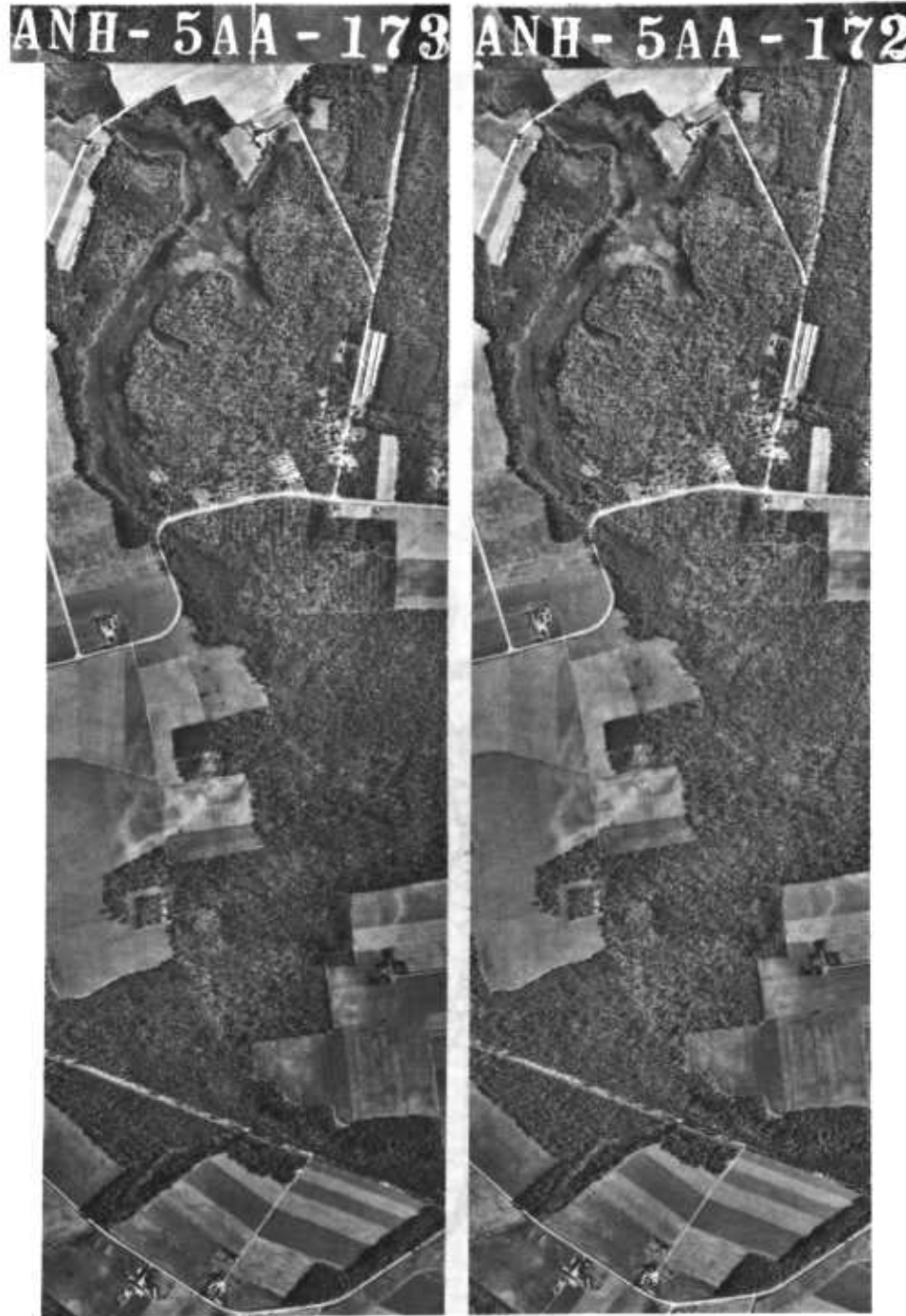
Land Use: Most of the area is in farms but some is in national forests, game refuges, and related uses. More than two-thirds is in forest, partly in farm woodlots but much in large holdings. Pulpwood is the main wood product; lumber and naval stores are other sources of income from forests. About one-eighth of the area is cropland and only 1 or 2 percent is in pasture. The proportion of cropland is somewhat higher in the north and nearly two-fifths of the Delmarva Peninsula is cropland. Vegetable crops, fruits, melons, sweetpotatoes, and Irish potatoes are highly important; corn, soybeans, wheat, and barley occupy large acreages, especially in the north. Some peanuts are grown on the better drained soils in Virginia and Georgia. Poultry farming is important in the north. Only a few other livestock are raised although recently the number of beef and dairy cattle has increased.

Elevation and Topography: Sea level to 100 feet; several low escarpments break the gradual increase from the coast inland. The nearly level coastal plain is crossed by many broad shallow valleys with widely meandering stream channels. Most of these valleys terminate in estuaries along the coast. Local relief is mainly a few feet to 10 or 20 feet. Some short steep slopes border the stream valleys.

Climate: *Average annual precipitation*—40 to 50 inches; highest in summer and lowest in autumn. *Average annual temperature*—55° to 70° F. *Average freeze-free period*—200 to 260 days, 280 days in a narrow belt along the coast, and 300 days in the extreme south.

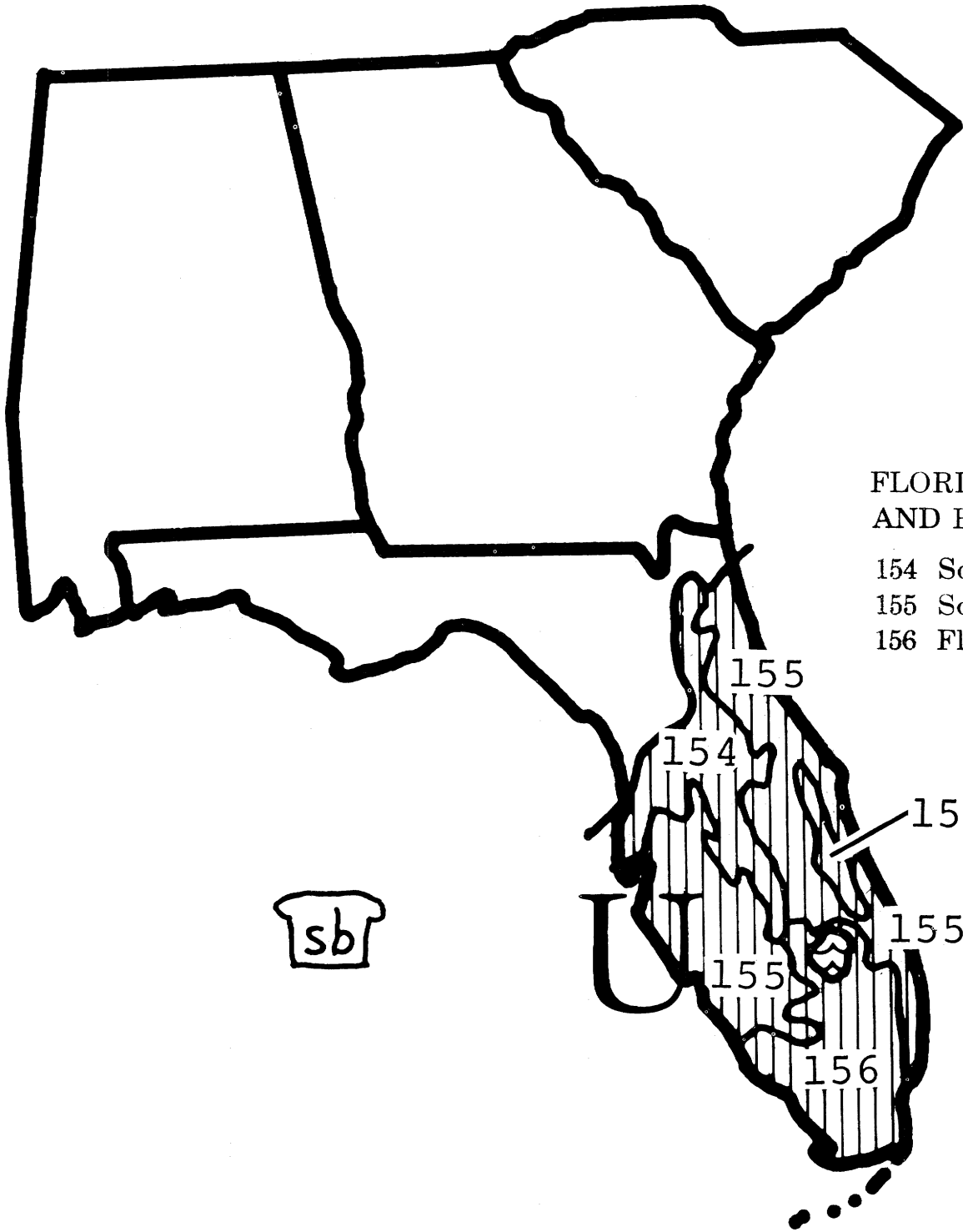
Water: Rainfall, perennial streams, and ground water provide an abundance of water. Water for domestic, municipal, and industrial use is obtained mainly from wells. Although many soils require artificial drainage before they can be used for crops, crops grown on some of the sandy soils need irrigation during droughts.

Soil: Soils having restricted drainage are dominant throughout the area. Most extensive are *Low-Humic Gley soils* (Plummer, Fallsington, and Rains in sandy sediments and Othello, Weston, Bertie, and Edisto in materials of finer texture). The associated wetter areas have *Humic Gley soils* (Pocomoke, Portsmouth, and Bayboro). *Red-Yellow Podzolic soils* (Lynchburg, Goldsboro, Keyport, Craven, and Eulonia) are on higher areas having somewhat better but still restricted drainage. On better drained sites in the north *Gray-Brown Podzolic soils* that have some properties of *Red-Yellow Podzolic soils* (Matapeake and Mattapex in silts and Sassafras and Woodstown in



sands) are the major soils. Other locally important soils are *Ground-Water Podzols* (Leon and St. Johns) in wet sands and *Regosols* (Lakeland, Evesboro, Blanton, and Eustis) on old beach ridges and dunes. Large areas of tidal marsh of unclassified organic and

mineral soils are along the coast and extend up the estuaries of most of the large streams. *Bog soils* also occupy fairly large areas, especially in the Dismal Swamp of Virginia and the Okefenokee Swamp of Georgia and Florida.



FLORIDA SUBTROPICAL FRUIT, TRUCK CROP,
AND RANGE REGION

- 154 South - Central Florida Ridge
- 155 Southern Florida Flatwoods
- 156 Florida Everglades and Associated Areas

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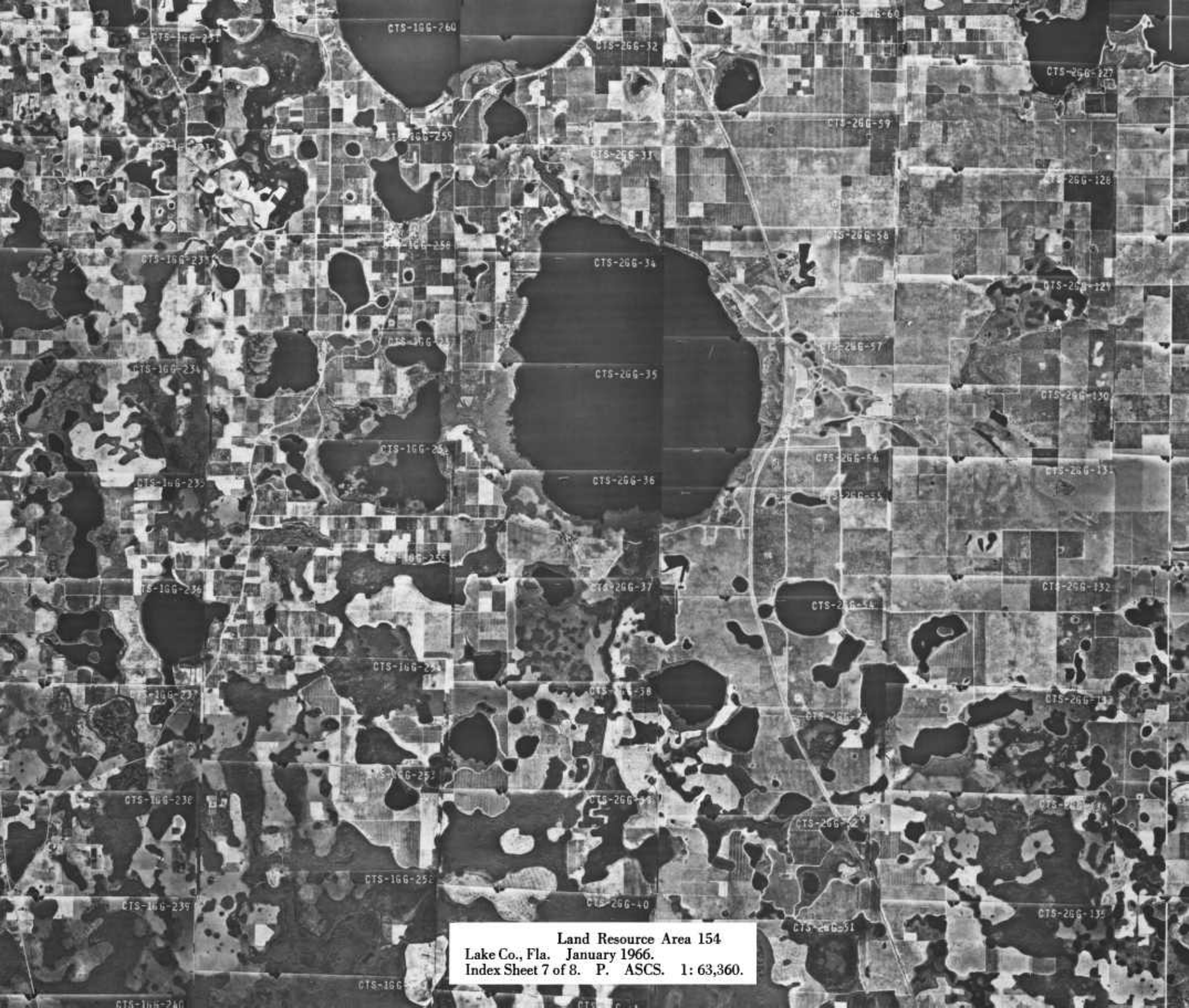
U—FLORIDA SUBTROPICAL FRUIT, TRUCK CROP, AND RANGE REGION

33,600 squares miles

This region consists of the southern two-thirds of the Florida peninsula. The average annual precipitation is 50 to 64 inches. Average annual temperatures are 70° to 75° F., and the freeze-free season ranges from 300 days in the north to 365 days in the south. A large part of the region lies south of the southern limit of annual frost.

Ground-Water Podzols, Low-Humic Gley soils, and Bog soils are the dominant soils on flat lands, but Red-Yellow Podzolic soils and sandy Regosols are dominant on the higher, more sloping ridges. There are large areas of Lithosols underlain by coral limestones in the south.

Citrus fruits, other subtropical fruits, and winter vegetables are the major crops throughout the region, but the acreage in pasture is somewhat larger than that in crops. More than two-thirds of the region is in forest or other native vegetation, much of which is grazed. Beef cattle are the principal livestock, and dairying is important near the larger cities. Sugarcane is a major crop locally in the south, and recently its acreage has been increasing rapidly.



Land Resource Area 154
Lake Co., Fla. January 1966.
Index Sheet 7 of 8. P. ASCS. 1: 63,360.

154—South-Central Florida Ridge

Florida
8,500 square miles

Land Use: About four-fifths of the area is privately owned, but only a small part is organized into farms. About two-fifths is in forest, partly in national forests and game refuges but mostly in other large holdings. Pulpwood and naval stores are the chief forest products. The forests are grazed extensively. About one-tenth of the area is in crops. This is the major citrus-producing area of Florida. Other subtropical fruits and many kinds of winter vegetables are grown also. More than one-fourth of the area is in pasture. About one-fifth of the pasture is improved and is intensively managed; the trend is to more pastures of this kind. Beef cattle are the principal livestock and dairying is important near some of the large cities. Phosphate mines are a prominent feature in the northern part of the area and in a few places they are encroaching on farmland.

Elevation and Topography: 50 to 150 feet, some hills 250 feet, and a narrow strip along the western edge at sea level. The nearly level to gently rolling coastal plain has a sandy mantle of varying thickness over limestone. The land surface is very irregular because of the many sinkholes that dot the area. Local relief is mainly in a few feet to a few tens of feet but in places is 100 feet or more.

Climate: *Average annual precipitation*—50 to 57 inches; highest in summer and early autumn and lowest in late autumn and winter. *Average annual temperature*—70° to 74° F. *Average freeze-free period*—300 to 350 days.

Water: Rainfall and ground water supply an abundance of water. Wells in the cavernous limestone that underlies much of the area yield large amounts of water that is highly mineralized but of good quality otherwise. There are many lakes in the sinkholes throughout the area but few perennial streams.

Soil: *Regosols* (Lakeland and Blanton formed in acid sands and Arredondo, Fort Meade, and Gainesville formed in phosphatic sands) are the dominant soils of the area. *Red-Yellow Podzolic soils* (Blich-ton and Zuber) formed in moderately fine and fine textured phosphatic parent materials are also important.





Land Resource Area 155
Okeechobee Co., Fla. January 1962.
Index Sheet 2 of 4. P. ASCS. 1: 63,360.

155—Southern Florida Flatwoods

Florida
17,900 square miles

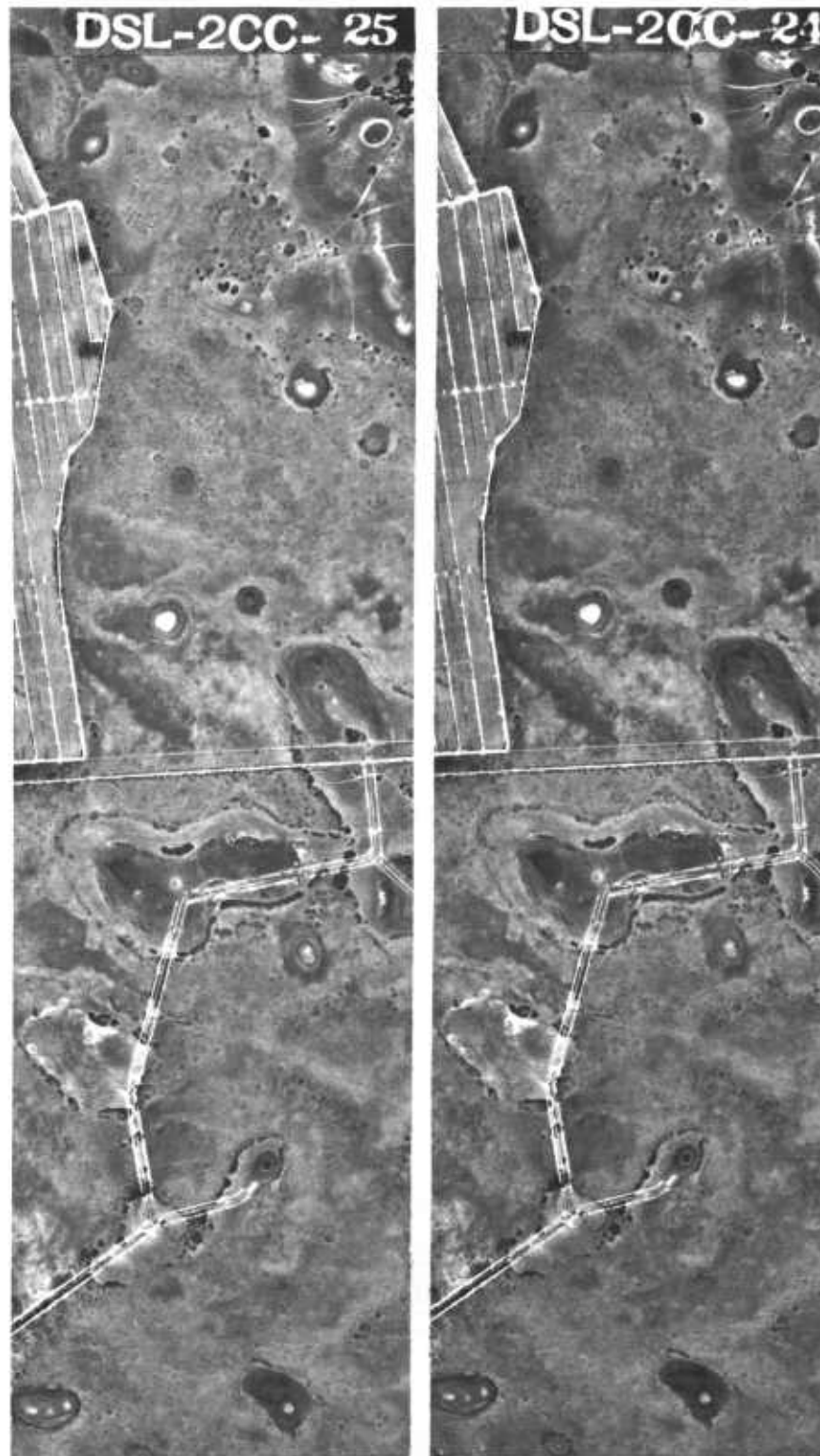
Land Use: About nine-tenths of the area is privately owned. Most of the remainder is in State and National forests, parks, game refuges, and military facilities. Most of the privately owned land is in large holdings and only a small part is organized into operating farm units. Slightly more than one-fourth of the total area is in forest, mostly of longleaf and slash pine and also some hardwoods. The forests are grazed extensively. About one-half of the area is in pasture. One-fourth to one-fifth of the pastures have adequate water-control systems and have a high carrying capacity. The remaining rangeland, consisting of mixed tame and native vegetation, has a low carrying capacity. Recently, the trend is to more improved pastures. About 5 percent is cropped, principally to many kinds of winter vegetables. Citrus fruits and some other subtropical fruits are increasing in importance.

Elevation and Topography: Sea level to 100 feet, increasing gradually from the coast inland. The nearly level coastal plain is mantled by sand of varying thickness over limestone. The many swamps, marshes, lakes, and streams are prominent landscape features. Most of the area is flat but some hammocks rise a few feet above the general level.

Climate: *Average annual precipitation*—50 to 60 inches; highest in summer through early autumn and much lower in late autumn and winter. *Average annual temperature*—70° to 75° F. *Average freeze-free period*—300 to 365 days.

Water: Rainfall, surface water, and ground water provide an abundance of water. On much of the cropland ground-water levels are controlled by canals and ditches. Excess water is pumped out during the rainy season and irrigation is provided during the growing season. Domestic and municipal water supplies are obtained mainly from wells in the underlying limestone. Water from this source is highly mineralized.

Soil: *Ground-Water Podzols* (Leon, Immokalee, and Pomello) from deep sands are the dominant soils. On wetter flats and depressions *Humic Gley soils* (Rutlege, Delray, and Manatee) and *Low-Humic Gley soils* (Pompano and Plummer) are the major soils. Locally, narrow to broad bands of tidal marsh occur along the coast. Inland, fresh-water marshes and swamps are common. *Regosols* (Blanton, Lakeland, and Adamsville) are conspicuous on low old beach ridges and dunes. They are of small total extent but are important to agriculture.





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Land Resource Area 156
Dade Co., Fla. December 1963.
Index Sheet 3 of 6. P. ASCS. 1: 63,360.

BUP-100- 33

156—Florida Everglades and Associated Areas

Florida

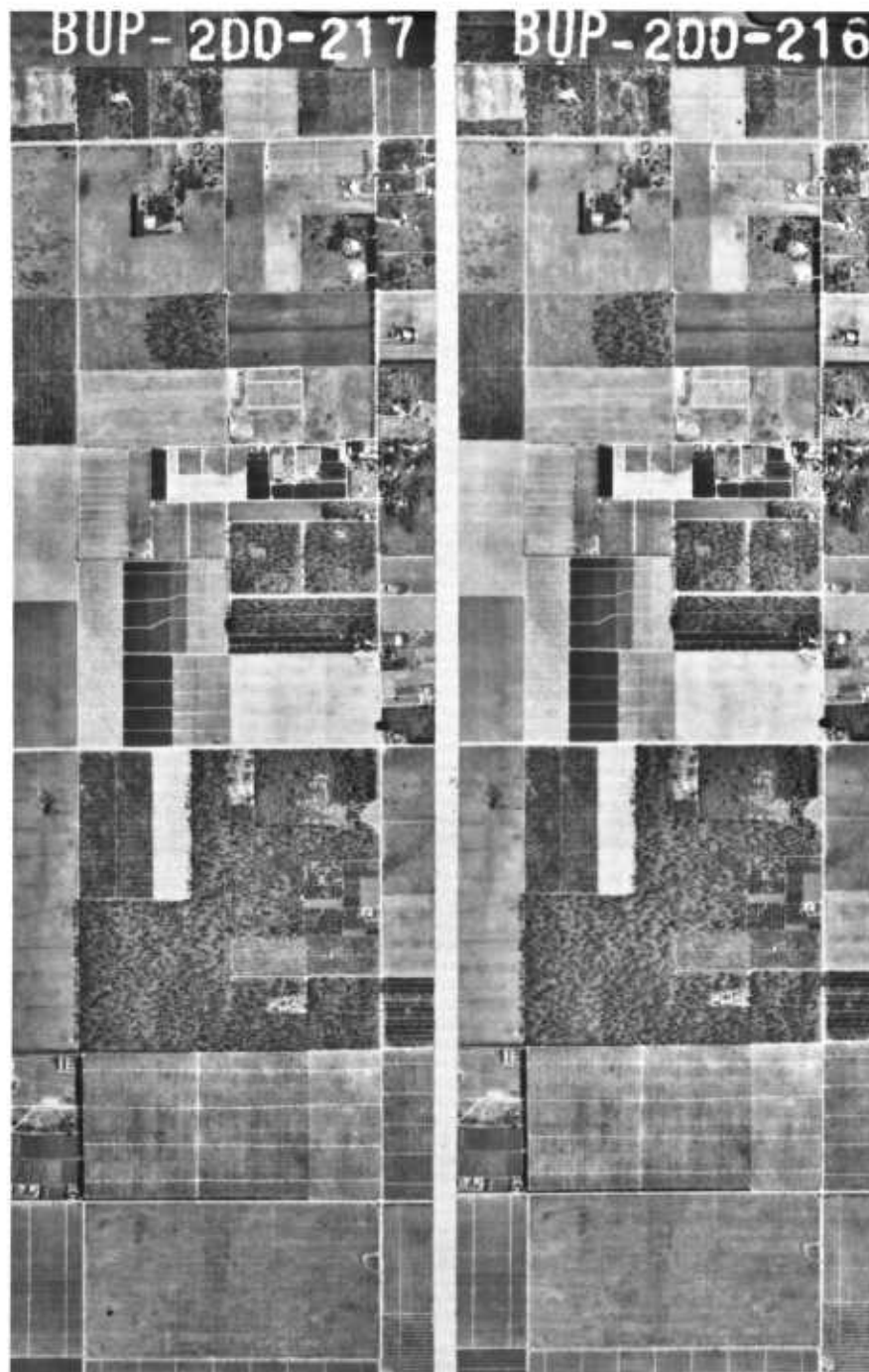
7,200 square miles

Land Use: Slightly more than one-half of the area is in Indian reservations, national parks, game refuges, and other large holdings. About one-fifth is forested. Cypress forests are most extensive but mangrove is widespread along the eastern and southern coasts. A large part of the area is open marsh covered by water-loving grasses, reeds, sedges, and other aquatic herbaceous plants. Hunting, fishing, and other recreational activities are major uses of much of the area. Only 5 percent is cropland and about 15 percent is in pasture. Winter vegetables constitute the main crop but some citrus fruits, avocado, and papaya are grown on better drained sites. Recently sugarcane has become increasingly important on the Bog soils south of Lake Okeechobee. The acreage of improved pasture has been increasing. Beef cattle are the principal livestock and dairying is important locally.

Elevation and Topography: Sea level to 25 feet. The level low coastal plain contains large areas of swamps and marshes. Poorly defined broad streams, canals, and ditches drain the area to the ocean. Most of the area is flat, but in the interior hammocks rise a few feet above the general level. Low beach ridges and dunes, mainly in the east, rise several feet above the adjoining swamps and marshes.

Climate: *Average annual precipitation*—50 to 64 inches; highest from late spring through midautumn and much lower in late autumn and winter. *Average annual temperature*—72° to 75° F. *Average freeze-free period*—335 to 365 days.

Water: Rainfall, surface water, and ground water provide an abundance of water. Near the coast both surface water and ground water may contain salts. A large part of the area is flooded during the rainy season. Canals and ditches are used to control the ground-water level for crops and pasture. Excess water is removed by pumping during the rainy season and irrigation water is applied during the dry season. Domestic and municipal water supplies are obtained from wells in the underlying limestones. The water is highly mineralized.



Soil: *Bog soils* (Loxahatchee, Everglades, and Gandy and large areas of unclassified muck and peat in swamps and marshes) are the principal soils in the area. In areas slightly less wet *Humic Gley soils* (Ochopee) and *Low-Humic Gley soils* (Perrine, Charlotte, Keri, Pompano, and Arzell) are also ex-

tensive. *Ground-Water Podzols* (Immokalee) on sandy flats and *Regosols* (Palm Beach, Lakewood, and St. Lucie) on old beaches and dunes are conspicuous in places but of small extent. *Lithosols* (Rockdale) and rockland occupy large areas in the southeastern part of the Everglades.

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