
DEPARTMENT OF THE INTERIOR
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**Modern palynomorph and weather census data from the
U.S. Atlantic Coast (Continental Margin Program samples
and selected NOAA weather stations)**

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INTRODUCTION

This report is a preliminary summary of palynomorph census data obtained from 25 modern nearshore marine bottom samples, selected along a northeast-southwest oriented transect, which extends from the Gulf of Maine (ME) to Key West (FL). It also includes a parallel transect of average summer/winter/annual temperature data and average annual precipitation data, compiled from the NOAA database, for 93 coastal and near-coastal weather stations selected for this study. Together these two datasets form a baseline modern analogue for a reconnaissance of Pliocene nearshore marine sediments, deposited during a time interval of global high-sea level, and now exposed on and along the U.S. Atlantic Coastal Plain from Martha's Vineyard (MA) to Sarasota (FL). This research is part of the U.S. Geological Survey's program to study the climatic and oceanographic conditions of the Pliocene, and is one of a series of open-file reports which makes available the datasets on which our multiple analyses are being done. The multivariate analyses and comparison of this shallow marine pollen dataset with an analogous Pliocene shallow marine pollen dataset will be presented elsewhere.

MATERIALS AND METHODS

The modern shallow marine bottom samples from which the palynomorphs were recovered and identified are splits from the Continental Margin Program (CMP) sample dataset housed at Woods Hole Oceanographic Institute (Hathaway, 1971). The station localities for the shallow marine transect are presented in Figure 1.

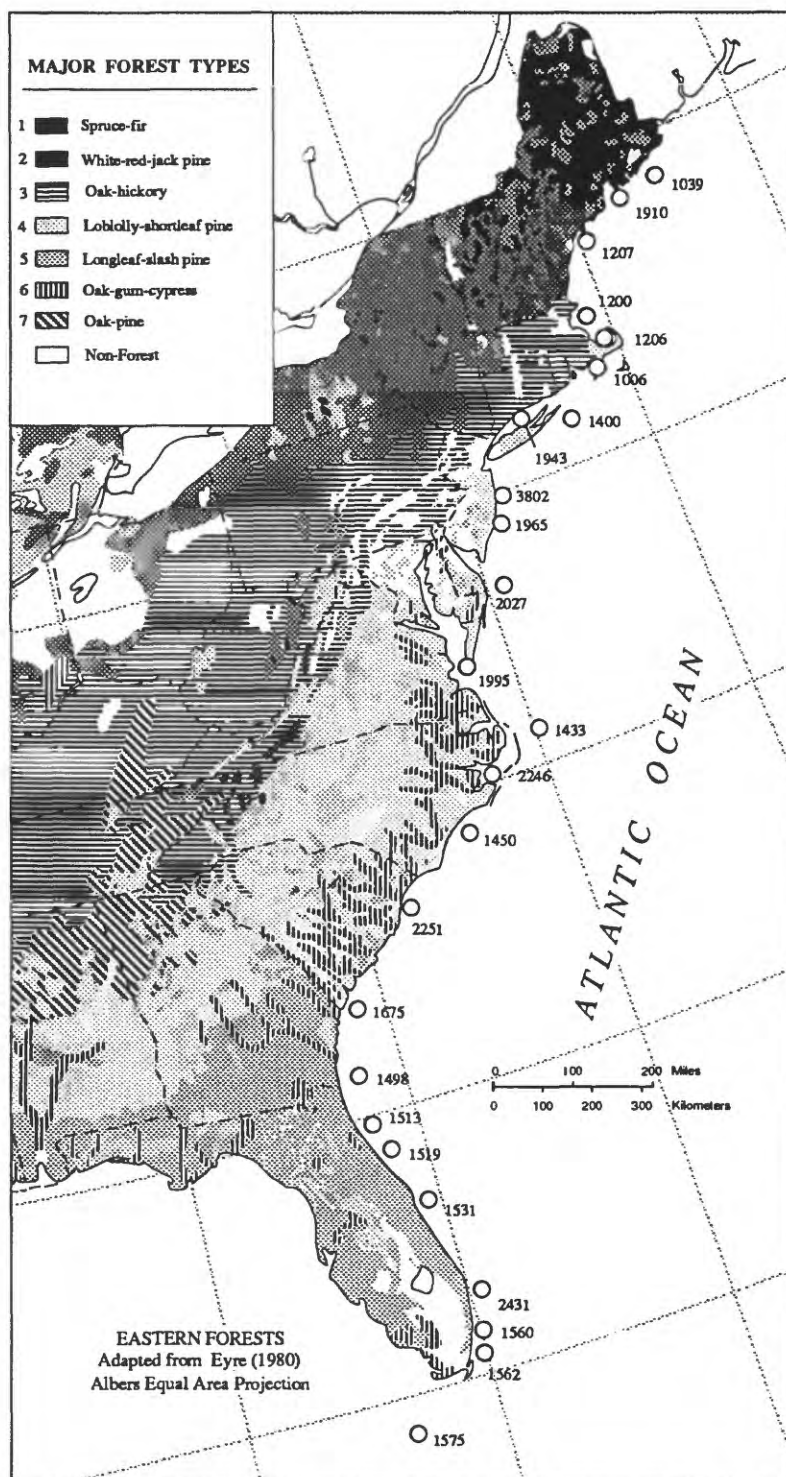


FIGURE 1. CONTINENTAL MARGIN PROGRAM TRANSECT STATIONS AND MAJOR FOREST TYPES OF THE EASTERN UNITED STATES

The weather data was compiled from raw data presented in the National Oceanographic and Atmospheric Administration's Climatological Data Annual Summary (NOAA-CDAS) for coastal portions of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and Florida for the years 1981-1990. This transect of 93 weather stations was selected by us from stations located at or near the Atlantic Coast (Figure 2A-2B).

CONTINENTAL MARGIN PROGRAM PALYNOMORPH DATASET

Twenty-five marine sediment ("bottom") samples (Fig. 1) were selected as acceptable stations for our transect, from an Atlantic Coast database of over 3500 shallow marine sediment samples. Only these samples, out of an original selection of approximately forty samples, met sedimentological and geographical prerequisites necessary for this study. Our final modern marine dataset was limited to those samples which contained an unoxidized silt fraction (the sediment most likely to contain preserved palynomorphs), which were deposited in a shallow marine environment, and which produced sufficient identifiable palynomorphs (300 specimens minimum) for pollen analyses. Of these twenty-five samples, twenty-three form the best analogue dataset for comparison to the nearshore marine Pliocene transect currently under study.

Many of these samples had a high clay fraction and did not contain abundant pollen. Obtaining an effective separation of the organic debris (pollen, spores, and plant fragments) from the clay therefore was critical for sufficient pollen recovery. Processing procedures for these sediment splits are summarized here. Approximately 20-50 grams of sediment were processed per station, depending upon availability. The dry samples were weighed, then treated with 20% HCl for 1-2 days to decalcify the sediment. No tracers (*Lycopodium*) were added. The samples were decanted and rinsed in DI water repeatedly until the sediment-water suspension was neutral. Wet mounts were made of each sample,

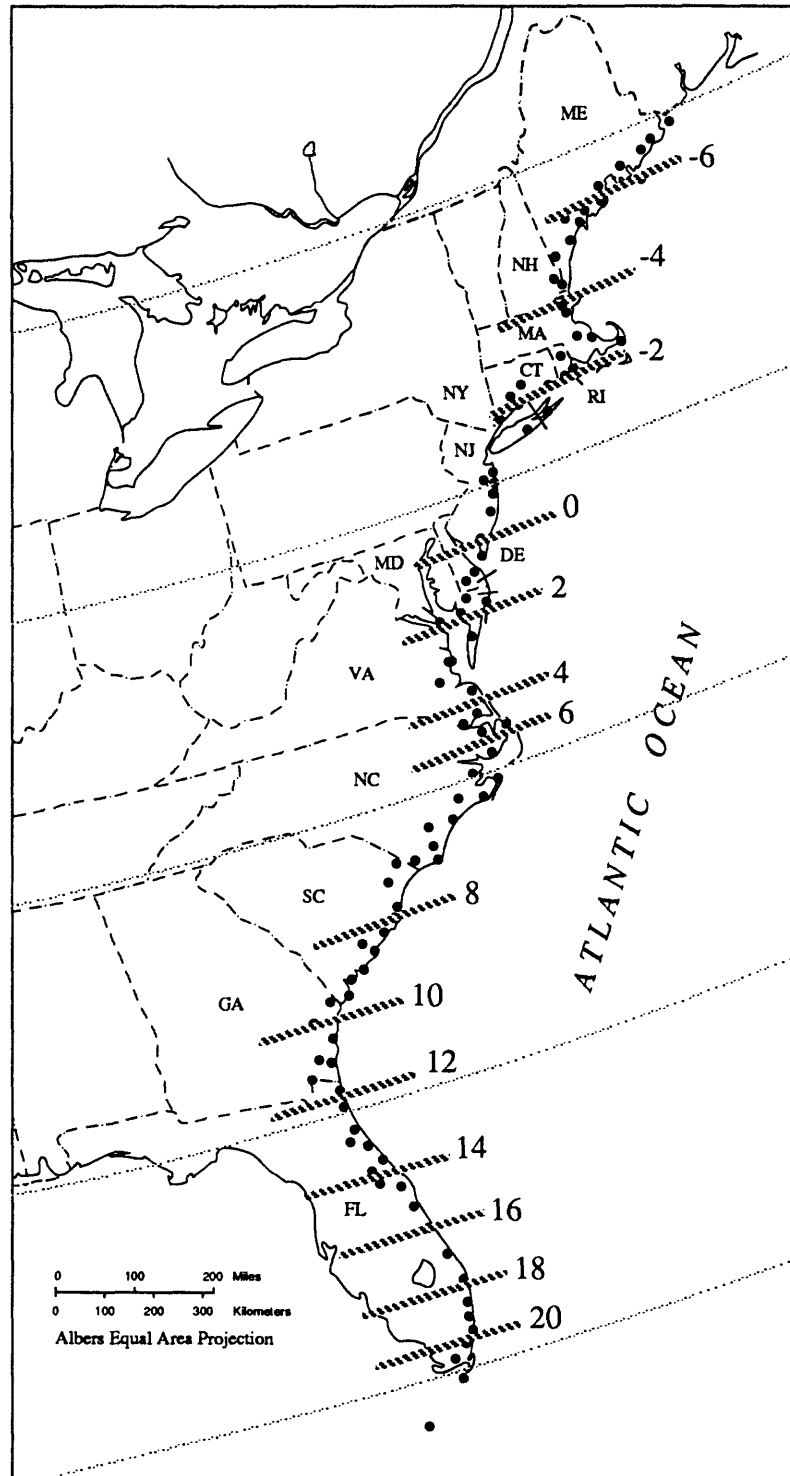


FIGURE 2A. NOAA CLIMATE TRANSECT COVERAGE
AVERAGE JANUARY ISOTHERMS (C^0) 1981-1990

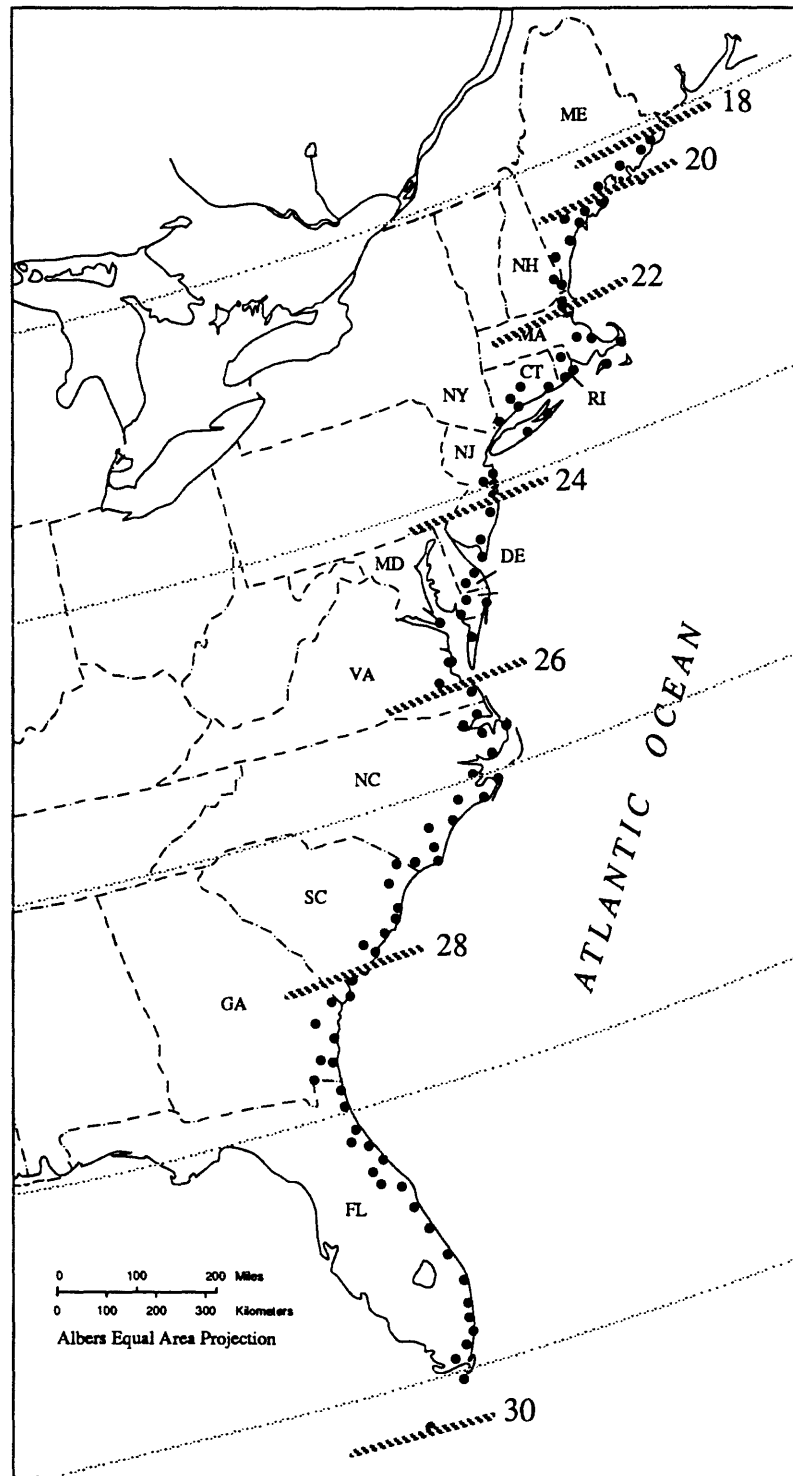


FIGURE 2B. NOAA CLIMATE TRANSECT COVERAGE:
AVERAGE JULY ISOTHERMS (C°) 1981-1990

and those samples which were not disaggregated or which had abundant clay were treated with 52% HF (in a fume hood) until the mineral fraction of each sample was disaggregated. The samples were siphoned and rinsed in DI water until neutral, and additional strew slides were made to check for relative abundance of residual clay. Those samples which were reduced to silt- and sand-sized particles were decanted, centrifuged, rinsed in 2% HCl, centrifuged, decanted, and put into an aqueous solution of zinc chloride (adjusted to 2.0 specific gravity). Those samples which still contained abundant clay after HCl and HF treatment had the clay fraction removed before being rinsed in dilute HCl and placed into zinc chloride. Clay removal was accomplished by repeated slow and brief centrifugation of these muds in a dilute low-sudsing detergent solution. The clay (and part of the organic debris) preferentially was held in suspension after centrifugation, and was decanted into a large beaker (one beaker for each sample). More soap solution was added, the sediment again centrifuged, and the supernatant was decanted into the large beaker; this process was repeated until the supernatant was clear after centrifugation (i.e., most of the clay had been transferred to the beaker). The silt and sand fraction from these samples was rinsed and centrifuged in water several times, rinsed in 2% HCl, centrifuged, drained, and treated with zinc chloride (2.0 sp. gr., as above). The zinc chloride-sediment suspension was centrifuged in 50 ml tubes for 20 minutes @ 800 rpm, then @ 2000 rpm for 10 minutes. The pollen fraction separated from the mineral fraction in the heavy liquid and was pipetted off of the top of the zinc chloride column into a 15 ml centrifuge tube. At this point the clay-rich supernatant was vacuum-filtered through an 8 μ m nylon filter to recover suspended palynomorphs from the soap decant. The palynomorphs were rinsed off the nylon filter with water and combined with those palynomorphs which were recovered from the heavy liquid treatment. The recombined palynomorph fraction for each sample was rinsed in DI water, centrifuged, and drained. Melted glycerin jelly was added to the drained palynomorph fraction and permanent microscope slide mounts were made.

Census counts of 300 specimens were made from each sample, for a total dataset of 7500 specimens.

Some of these samples contained enough pollen that only several traverses across the microscope slide were necessary to identify 300 grains. Those samples which produced fewer than 300 specimens were discarded as candidate study sites for this transect. Sixty taxa and census categories (combinations of taxa) were identified from these samples. Conifer pollen frequently was encountered as broken specimens in these preparations. We have addressed this problem by counting broken specimens (isolated sacci) as half-specimens (and therefore have not counted isolated conifer corpi) in order to keep our counts consistent. This conifer subtotal then was added to the number of complete conifer pollen grains for a final total. For purposes of this study, pollen identifications were made to the generic level. In several cases identifications were feasible only to family level. These taxa were coded in the census database as noted below in Table 1. Palynomorph census figures are presented in Table 2. The original preparations from which these census data were compiled are reposited in the Pliocene Reconstruction, Interpretation, and Synoptic Mapping (PRISM) collections database at the U.S. Geological Survey, Reston, VA.

NOAA-CDAS DATABASE

One hundred weather stations were selected from coastal and near-coastal sites along the U.S. Atlantic Coast to establish a baseline for average winter, summer, and annual temperatures and annual rainfall latitudinally along the pollen transect. These temperature and precipitation data were compiled to form a climatic data transect extending from northern Maine to the Florida Keys (Figure 2, Table 3). Average temperatures and isotherms were compiled for January (winter) and July (summer) for the 1981-1990 ten year interval. February and August temperatures also were compiled and plotted to permit comparison to estimates of Atlantic Ocean surface and bottom water temperatures for the middle Pliocene, recently made on the basis planktic foraminifera and ostracodes (Cronin and Dowsett, 1990; Dowsett and Poore, 1990).

TABLE 1. CENSUS CODES AND IDENTIFICATION CATEGORIES

CODE	GENUS (FAMILY)	COMMON NAME	CODE	GENUS (FAMILY)	COMMON NAME
ABIES	<i>Abies</i>	firs	MYRIO	<i>Myriophyllum</i>	submerged aquatics (Family Haloragaceae)
ACER	<i>Acer</i>	maples	NYMPH	Nymphaeaceae	water lilies
ALNUS	<i>Alnus</i>	alders	NYSSA	<i>Nyssa</i>	water gum, cotton gum
AMBRO	<i>Ambrosia</i>	ragweed	OSMUN	<i>Osmunda</i>	fern
ARTEM	<i>Artemisia</i>	sage	OS-CA	<i>Ostrya/Carpinus</i>	hophornbeam / hornbeam
BETUL	<i>Betula</i>	birches	PALMA	Palmae	palms, palmettos
BOTRM	<i>Botrychium</i>	fern	PICEA	<i>Picea</i>	spruce
BOTRS	<i>Botryococcus</i>	alga	PINUS	<i>Pinus</i>	pinus
CARYA	<i>Carya</i>	hickory	PLANE	<i>Planera</i>	water elms
CASTA	<i>Castanea</i>	chestnut	PLATA	<i>Platanus</i>	sycamores
CEITI	<i>Celtis</i>	hackberry	POLYG	<i>Polygonum</i>	buckwheat (smartweed)
CH-AM	Chenopodiaceae + Amaranthaceae	goosefoot and pigweed families	POPUL	<i>Populus</i>	poplar
COMPO	Compositae	daisy family	PRUNU	<i>Prunus</i>	cherry, plum
CORNU	<i>Cornus</i>	dogwood	QUER	<i>Quercus</i>	oak
CORYL	<i>Corylus</i>	hazelnuts	RUBUS	<i>Rubus</i>	raspberry
CYPER	Cyperaceae	sedge	SALIX	<i>Salix</i>	willow
EPHED	<i>Ephedra</i>	ephedra	SAMBU	<i>Sambucus</i>	elderberry
ERICA	Ericaceae	heaths, laurels	SAO	ferns (monolete)	
FAGUS	<i>Fagus</i>	beech	SARCO	<i>Sarcobatus</i>	greasewood
FRAXI	<i>Fraxinus</i>	ash	SCO	ferns (trilete)	
GALIU	<i>Galium</i>	bedstraw (licorice)	SPHAG	<i>Sphagnum</i>	mosses
GLEDI	<i>Gleditsia</i>	honey locust	TCT	Taxodiaceae- Cupressaceae- Taxaceae	cypresses, cedars, junipers
GRAMI	Gramineae	grasses	TILIA	<i>Tilia</i>	basswood (linden)
ILEX	<i>Ilex</i>	holly	TSUGA	<i>Tsuga</i>	hemlock
JUGLA	<i>Juglans</i>	walnut	ULMUS	<i>Ulmus</i>	elms
LARIX	<i>Larix</i>	larch	UNKNO	unknown	
LIQUI	<i>Liquidambar</i>	sweetgum	VITIS	<i>Vitis</i>	grape
LYCOP	<i>Lycopodium</i>	clubmosses			
MAGNO	<i>Magnolia</i>	magnolia			
MENYA	<i>Menyanthes</i>	bog plants (Family Menyanthaceae)			
MYRIC	<i>Myrica</i>	bayberry			

DISCUSSION

The relative abundance of the most common taxa preserved in modern shallow marine bottom sediments appears to approximate the major vegetational trends established from terrestrial pollen data along the Atlantic Coast moderately well (Figure 3). The latitudes along the coast at which an individual taxon (in both the continental and marine pollen records) is found in greatest abundance appears to be representative of its maximum occurrence in the onshore vegetational assemblage. The raw data for selected taxa or census categories from the CMP transect stations also show several strongly developed but localized perturbations superimposed on these regional trends. Several of these perturbations appear to be caused by proximity to major river discharge, such as those recorded at stations 1675 and 2027 (Figure 4A). Seasonal pollination ("bloom" effects) also may be a factor, and could alter the regional vegetational pollen signature temporarily. Once these local effects are considered, and the transect sample coverage is averaged with latitude (Figure 4B), the overall pollen assemblage trend appears strongly representative of the five major forest types noted by Eyre (1980) which exist (with gradation) between 46°-26° north latitude along the U.S. Atlantic Coast. These forest types, from north to south, are: 1) Spruce-Fir (*Picea- Abies*), 2) White Pine-Red Pine-Jack Pine (*Pinus strobus- P. resinosa- P. banksiana*), 3) Oak-Hickory (*Quercus- Carya*), 4) Loblolly Pine-Shortleaf Pine (*Pinus taeda- P. echinata*), and 5) Longleaf Pine-Slash Pine (*Pinus palustris- P. ellioti*). A sixth type, Oak-Gum-Cypress (*Quercus- Nyssa- Taxodium*) is widely established in middle to low latitudes, but restricted to river drainages inland to the Fall Line.

It is important to note that several of these major forest zones are characterized by more than one species of pine (*Pinus*). The species within this genus are not easily identified or discriminated solely on the basis of their pollen morphology. However, the pollen spectra in the shallow marine record, including the pine pollen spectrum, correlates positively with trends in continental pollen records at similar latitudes (see Figure 3, after Delcourt et al. (1984) and Bartlein et al. (1986)).

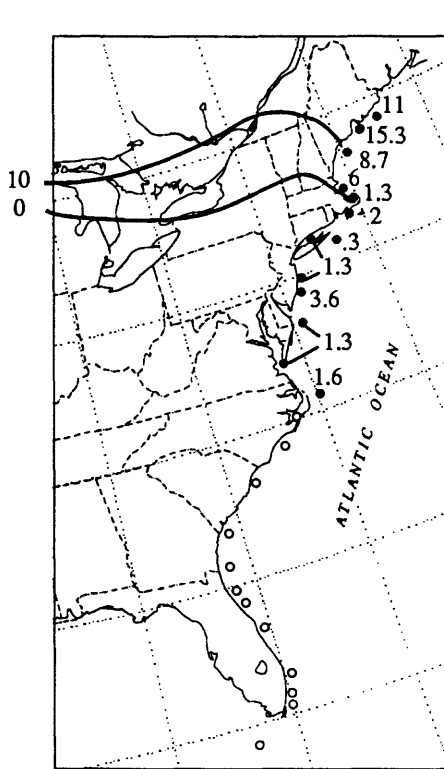


FIGURE 3A. PERCENT *Picea*

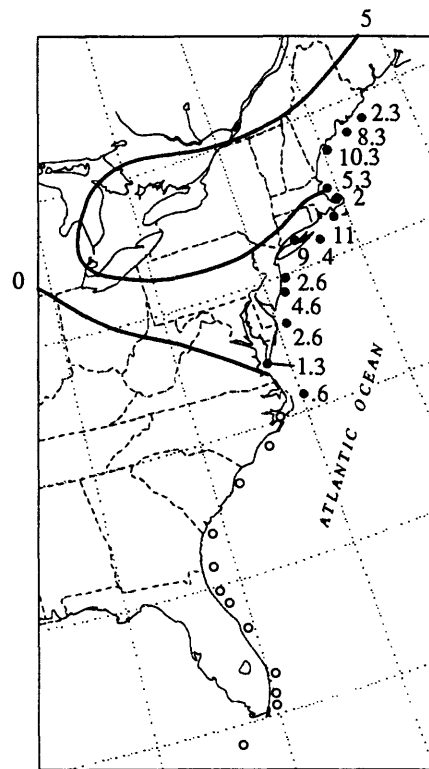


FIGURE 3B. PERCENT *Tsuga*

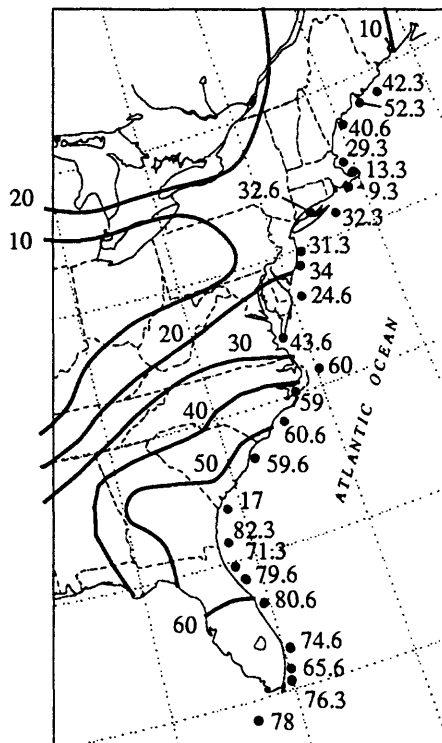


FIGURE 3C. PERCENT *Pinus*

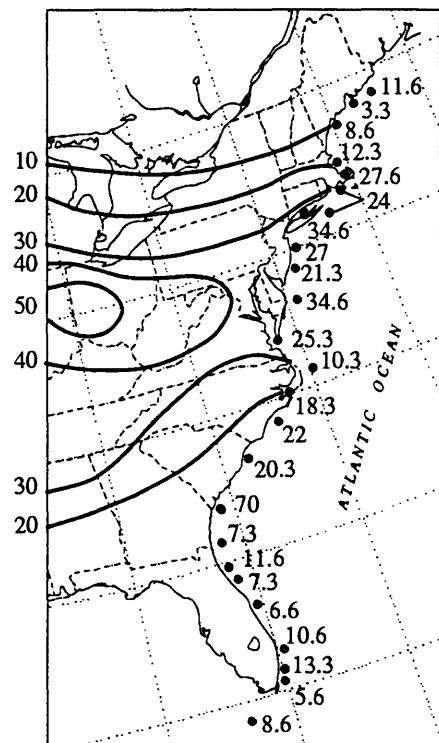


FIGURE 3D. PERCENT *Quercus*

FIGURE 3. COMPARISON OF CONTINENTAL POLLEN ISOPOLLS WITH POLLEN PERCENTAGES IN MODERN SHALLOW MARINE RECORD. ISOPOLLS FROM BARTLEIN ET AL. (1986). (OPEN CIRCLE DENOTES ABSENCE OF TAXON AT GIVEN CMP STATION)

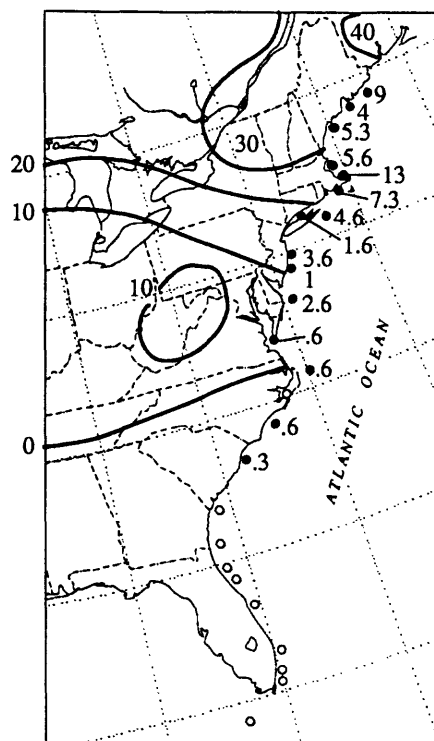


FIGURE 3E. PERCENT *Betula*

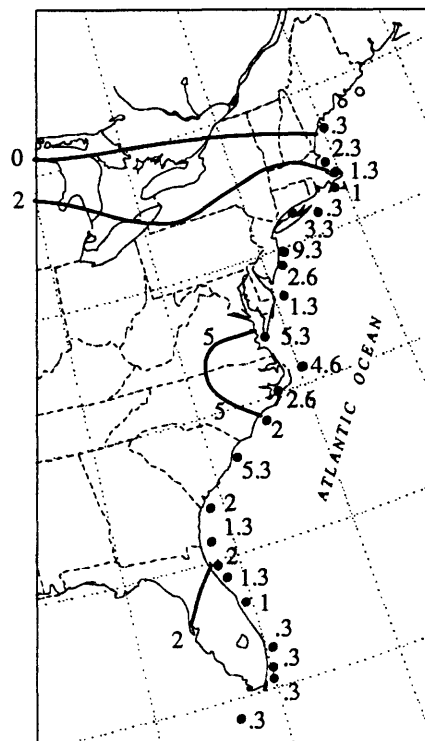


FIGURE 3F. PERCENT *Carya*

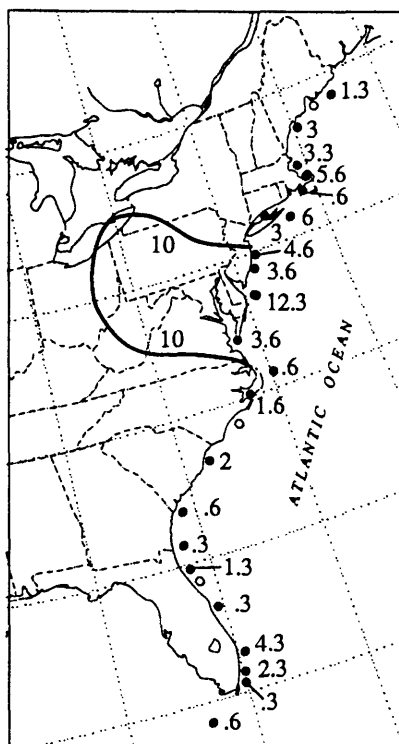


FIGURE 3G. PERCENT PRAIRIE FORBS
(*Artemesia* + *Compositae* +
Chenopodiaceae + *Amaranthaceae*)

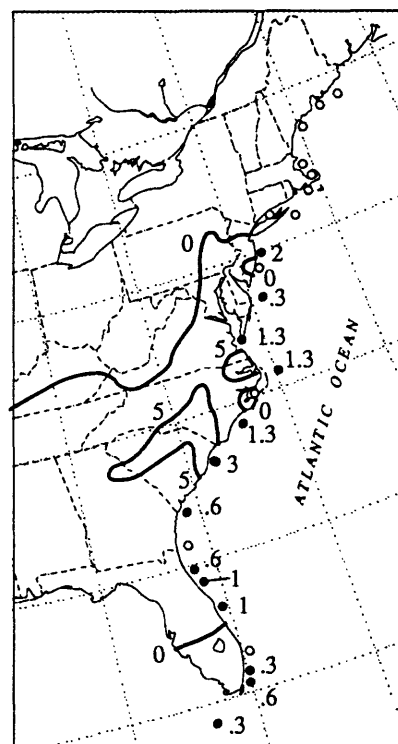


FIGURE 3H. PERCENT *Liquidambar*

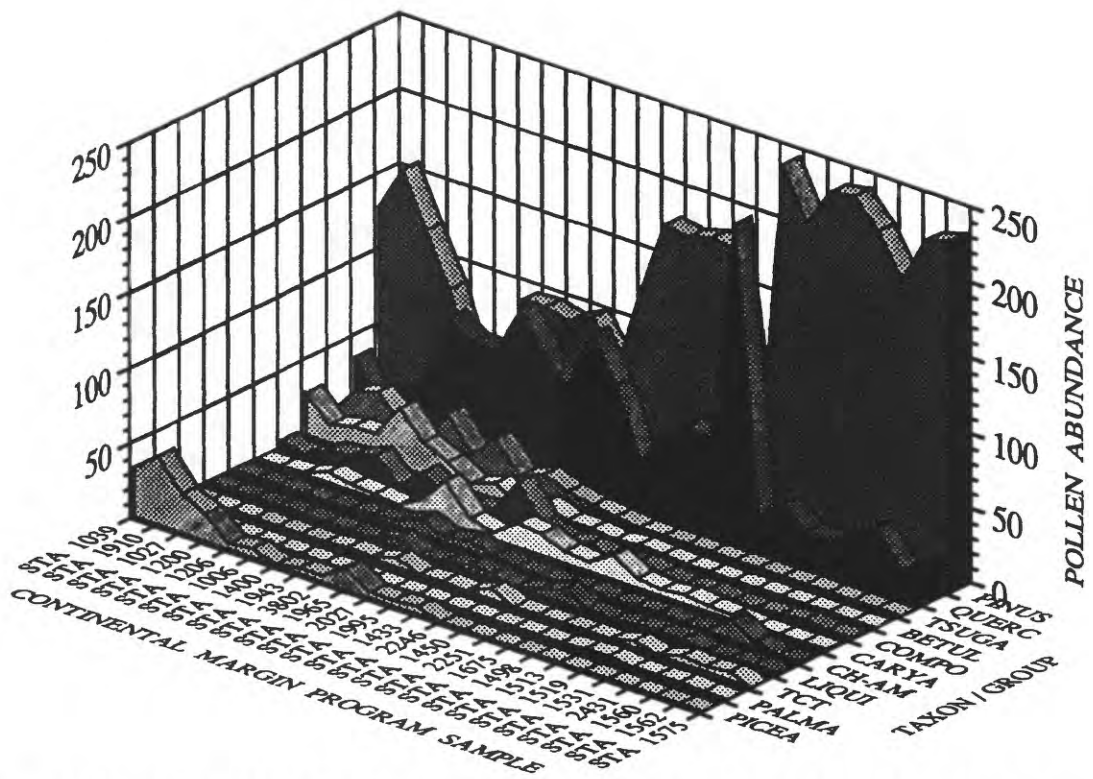


FIGURE 4A. PLOT OF ABUNDANCE OF SELECTED TAXA FOR ALL MODERN MARINE SITES

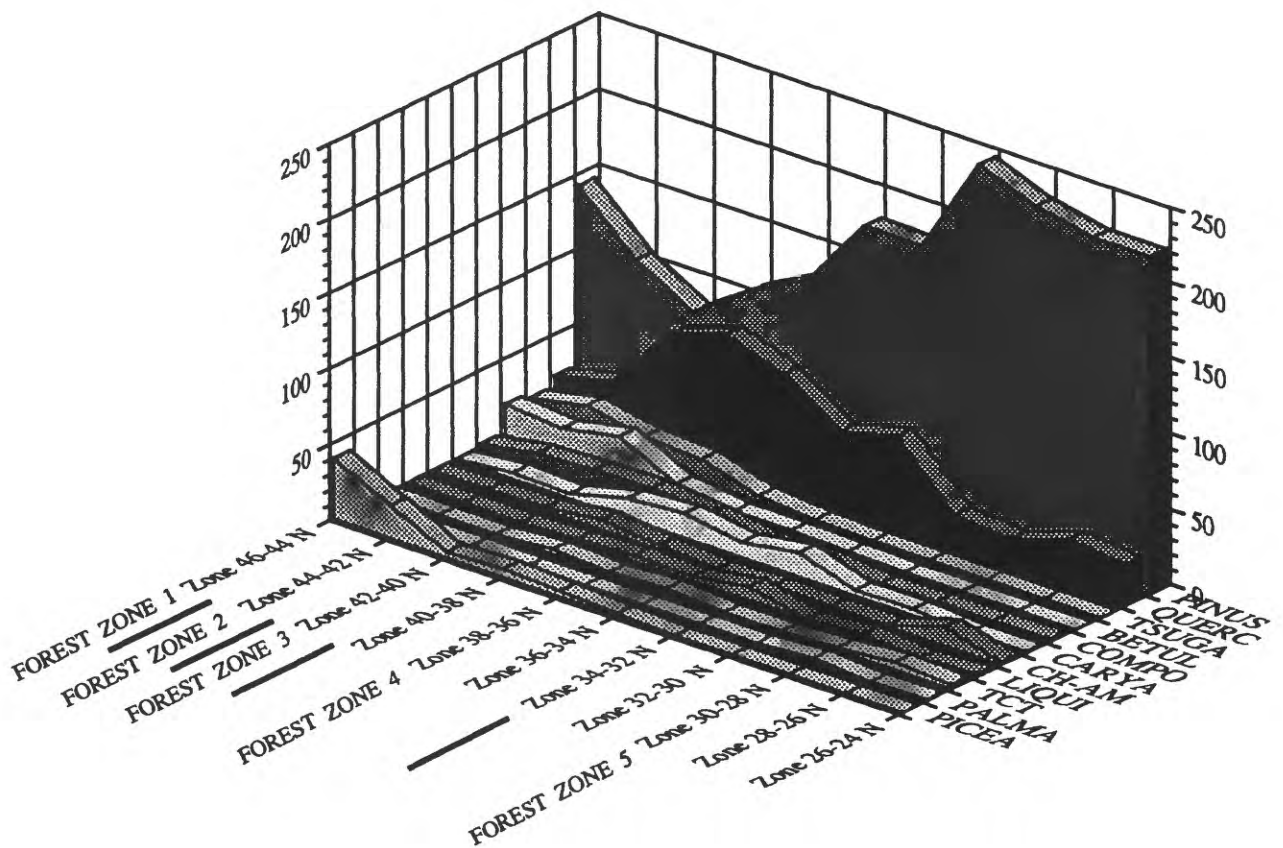


FIGURE 4B. PLOT OF SELECTED TAXA (MODERN) AVERAGED FOR LATITUDE

The pollen maxima for *Picea*, *Tsuga*, *Betula*, *Quercus*, *Carya*, and *Pinus* are very similar latitudinally with respect to the continental and marine records (but are not consistent quantitatively). For example, some taxa (e.g., *Pinus*) are two to four times more abundant in shallow marine sediments than in continental sediments, while others (e.g., *Betula*) appear to be underrepresented by a factor of two to three in the marine record.

Although arboreal pollen is the principal assemblage component in these samples, it is not the only useful palynological component in the shallow marine record. Herbaceous pollen taxa in the marine record also appear to respond both qualitatively and quantitatively to vegetational trends along the coast. For example, the presence of the Everglades (approximately 26°-24° N latitude) is indicated by a localized influx of nonarboreal pollen at marine stations 2431, 1560, and 1562 (Fig. 4B). Additionally, the pollen maximum for "prairie-forbs" (=Compositae + Chenopodiaceae + Amaranthaceae + *Artemesia*), as defined by Bartlein et al. (1986), is coincident for the continental and nearshore marine pollen record.

Finally, before accurate palynological analyses of the shallow marine record can be made it also is important to determine the degree to which Atlantic longshore currents alter and/or displace the shallow marine pollen record relative to the pollen record (and actual forest zones) onshore. Our initial comparisons of the major forest trends, the continental pollen record, and the Atlantic Coastal Plain vegetational zones suggests that southerly displacement of the marine pollen assemblages is minimal (Figures 1, 3, and 4). This effect is important to assess because it is relevant to an accurate interpretation of the Pliocene shallow marine pollen record, our primary objective.

PRELIMINARY CONCLUSIONS

Qualitative comparison between the continental pollen record and the shallow marine pollen record (this

study) suggests the following: 1.) The nearshore marine record is more closely representative of onshore regional vegetational trends than of localized trends, although local trends can be recognized, 2.) the predominantly southerly longshore and shelf currents along the U.S. Atlantic Coast do not appear to have a noticeable effect on the southerly displacement of the marine pollen record relative to modern continental (onshore) records, 3.) some pollen taxa (e.g., *Pinus*) clearly are overrepresented in the shallow marine record, whereas others (e.g., *Betula*) appear to be underrepresented, and 4.) when local biasing effects (such as major river discharge) are taken into consideration, nearshore marine pollen assemblages appear to be good approximate indicators of latitudinally-similar continental pollen trends and regional forest assemblages.

ACKNOWLEDGEMENTS

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TABLE 2. CONTINENTAL MARGIN PROGRAM (CMP) TRANSECT: POLLEN CENSUS

	1039	1910	1027	1200	1206	1006	1400	1943	3802	1965	2027	1995	1433	2246	1450	2251	1675	1498	1513	1519	1531	2431	1560	1562	1575
ABIES	0	5	4	0	1	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ACER	1	2	1	3	4	5	1	0	2	2	0	7	4	0	0	0	0	0	0	0	0	0	0	0	
ALNUS	7	1	10	5	9	2	1	2	3	0	3	0	0	0	0	2	0	0	0	0	1	0	1	0	
AMBRO	0	0	0	0	13	5	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	
ARTEM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BETUL	27	12	16	17	39	22	14	5	11	3	8	2	2	0	2	1	0	0	0	0	0	0	0	0	
BOTRS	0	0	0	1	1	10	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	
BOTRM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CARYA	0	0	1	7	4	3	1	10	28	8	4	16	14	8	6	16	6	4	6	4	3	1	1	1	
CASTA	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CEITI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CH-AM	0	0	1	0	1	1	3	4	10	4	7	3	0	0	0	2	0	1	2	0	1	13	4	0	
COMPO	4	0	8	10	16	1	15	5	4	7	30	8	2	5	0	4	2	0	2	0	0	1	3	1	
CORNU	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	2	0	
CORYL	4	5	0	3	5	9	3	6	0	8	5	5	3	1	1	4	4	0	4	1	3	1	0	0	
CYPER	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
EPHED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
ERICA	0	0	0	1	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
FAGUS	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
FRAXI	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	
GALJU	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	

TABLE 2. (CONT.)

	1039	1910	1027	1200	1206	1006	1400	1943	3802	1965	2027	1995	1433	2246	1450	2251	1675	1498	1513	1519	1531	2431	1560	1562	1575
GLEDI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GRAMI	0	0	0	1	4	1	0	1	12	0	0	4	2	0	0	0	0	0	0	0	0	0	2	0	0
ILEX	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
JUGLA	0	1	3	0	2	1	0	0	2	4	2	1	5	1	0	0	0	0	0	0	0	0	2	0	0
LARIX	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LIQUI	0	0	0	0	0	0	0	0	6	0	1	4	4	0	4	9	2	0	2	3	3	0	1	2	1
LYCOP	0	4	6	16	6	3	0	0	0	5	0	0	3	1	0	0	0	0	0	1	0	0	0	0	0
MAGNO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	6	0
MENYA	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MYRIC	0	0	0	7	0	0	0	0	0	1	0	0	2	1	0	0	0	2	1	2	2	2	1	2	0
MYRIO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NYMPH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NYSSA	0	0	0	0	5	8	0	0	6	4	1	2	4	4	1	0	0	0	0	3	0	0	0	4	0
OSMUN	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0
OS-CA	0	0	0	1	0	0	1	1	3	0	0	1	1	0	0	0	0	0	0	1	0	0	1	0	0
PALMA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	1	0	0
PICEA	33	46	26	18	4	6	1	4	4	14	4	4	5	0	0	0	0	0	0	0	0	0	0	0	0
PINUS	127	157	122	88	40	28	97	98	94	102	74	131	180	177	182	179	51	247	214	239	242	224	197	229	234
PLANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
PLATA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POLYG	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POPUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PRUNU	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0

TABLE 2. (CONT.)

	1032	1910	1027	1200	1206	1006	1400	1943	3802	1965	2027	1995	1433	2246	1450	2251	1675	1498	1513	1519	1531	2431	1560	1562	1575
QUERC	35	10	26	37	83	72	72	104	81	64	104	76	31	55	66	61	210	22	35	22	20	32	40	17	26
RUBUS	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SALIX	0	0	0	7	5	2	0	0	0	1	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0
SAMBU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SAO	2	7	1	7	4	10	0	1	1	1	2	1	1	0	2	2	0	3	1	2	1	1	2	4	3
SARCO	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
SCO	26	5	9	10	5	16	30	5	0	5	20	2	6	3	2	4	0	0	2	1	1	4	5	5	2
SPHAG	0	1	5	5	2	11	0	0	0	2	0	1	0	2	0	0	0	0	0	3	0	0	0	0	0
TCT	0	0	0	0	0	0	0	2	1	6	0	1	0	7	0	0	0	0	0	4	0	5	3	5	0
TILIA	1	1	1	1	1	0	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
TSUGA	7	25	31	17	6	33	12	27	8	14	8	4	2	0	0	0	0	0	0	0	0	0	0	0	0
ULMUS	0	0	0	3	7	2	0	3	2	1	0	1	2	0	4	0	1	0	0	0	0	0	4	1	0
UNKNO	25	18	29	30	30	46	42	22	12	42	22	25	18	29	28	14	23	21	29	10	23	13	25	18	31
VITIS	0	0	0	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
TOTAL	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300

TABLE 3. WEATHER DATA FROM 92 U.S. ATLANTIC COAST STATIONS (COMPILED FROM NOAA REPORTS, 1981-1990.)

YEAR	STATION	Elevation (ft.)	Latitude	Longitude	1981-1990			1981-1990			1990			1990		
					Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)
	Eastport, ME	85	44° 55'	67° 00'W	-5.7	17.6	6.3	1039.4	18.8	7.6	1110.5					
	Jonesboro	185	44° 39'	67° 39'W	-7.7	18.2	6.1	1339.6	19.3	7.0	1583.2					
	Ellsworth	20	44° 32'	68° 26'W	-6.4	19.7	7.2	1127.0	20.7	8.1	1279.1					
	Belfast	30	44° 24'	69° 00'W	-6.3	20.0	7.4	1203.2	20.4	8.3	1211.1					
	Acadia Natl PK	470	44° 21'	68° 16'W	-5.9	19.8	7.2	1463.8	20.7	8.3	1605.8					
	West Rockport 1W	381	44° 12'	69° 09'W	-7.4	19.3	6.6	1272.8	20.7	8.2	1410.7					
	New Castle	190	44° 03'	69° 32'W	-6.1	20.2	7.7	1167.6	20.4	8.3	1331.5					
	Brunswick	70	43° 54'	69° 56'W	-5.9	20.7	7.9	1227.6	21.4	9.1	1379.0					
	Portland WSO	45	43° 39'	70° 19'W	-5.8	20.7	7.9	1160.8	21.3	8.9	1338.3					
	Sanford 2NNW	279	43° 28'	70° 47'W	-5.9	21.3	8.4	1259.8	21.5	9.6	1276.1					
	Durham, NH	74	43° 09'	70° 57'W	-5.5	21.1	8.4	1085.1	21.4	9.6	1173.0					
	Greenland	85	43° 01'	70° 50'W	-4.7	21.0	8.6	1263.7	20.7	9.6	1354.3					
	Haverhill, MA	18	42° 46'	71° 04'W	-4.9	21.6	8.9	1205.7	22.1	10.3	1316.2					
	Middletown	90	42° 36'	71° 01'W	-3.4	22.1	9.6	1168.9	22.2	10.7	1186.4					
	Peabody	170	42° 32'	70° 59'W	-2.3	22.8	10.4	1226.1	22.8	10.7	1355.3					
	Hingham	30	42° 14'	70° 55'W	-2.5	21.9	9.9	1285.2	22.2	11.2	1241.6					
	Brockton	79	42° 03'	71° 00'W	-2.7	22.7	10.2	1160.8	22.2	11.2						
	Plymouth-Kingston	45	41° 59'	70° 42'W	-3.5	21.5	9.1	1304.8	21.7	M	M					
	East Wareham	20	41° 46'	70° 40'W	-2.5	21.5	9.6	1224.8	22.2	M	M					
	Chatham WMSO	50	41° 40'	69° 58'W	-0.7	19.9	9.9	1195.8	26.2	10.5	1191.8					
	New Bedford	70	41° 38'	70° 56'W	-1.4	22.7	10.7	1295.4	26.2	11.8	1074.7					
	Edgartown	20	41° 23'	70° 31'W	-1.4	21.1	10.0	1153.4	23.0	11.1	1337.3					
	Providence WSO AP, RI	51	41° 44'	71° 26'W	-2.3	22.9	10.7	1189.5	22.8	11.7	1137.4					
	Newport	20	41° 31'	71° 19'W	-1.1	21.8	10.6	1180.3	22.2	12.0	1086.6					
	Kingston	100	41° 29'	71° 32'W	-2.4	21.7	9.9	1328.7	23.3	11.2	1217.9					
	Middletown 4W, CT	369	41° 33'	72° 43'W	-2.2	23.6	10.9	1285.2	23.8	12.2	1443.2					
	Groton	40	41° 21'	72° 03'W	-2.3	22.2	10.5	1270.0	25.5	11.1	1242.1					
	New Haven	24	41° 18'	72° 56'W	-3.1	24.7	11.8	1251.7	M	M	1397.0					
	Bridgeport WSO AP	10	41° 10'	73° 08'W	-1.8	23.2	10.9	1047.2	26.2	12.2	1115.3					
	Stamford 5N	190	41° 08'	73° 33'W	-2.7	23.0	10.8	1280.7	22.8	M	M					
	Bridgechampton, NY	60	40° 57'	72° 18'W	-1.4	22.1	10.5	1240.0	22.2	11.6	1251.7					
	Riverhead Res Far	100	40° 58'	72° 43'W	-0.7	23.7	11.7	1221.0	23.7	13.1	1270.0					
	Paichogue 2N	55	40° 48'	73° 01'W	-1.1	23.4	11.4	1311.4	23.3	12.7	1511.6					
	Long Branch Oakhurst, NJ	30	40° 16'	74° 00'W	-0.8	23.3	11.4	1087.6	23.8	M	M					
	Toms River	10	39° 57'	74° 13'W	-1.1	23.8	11.6	1160.8	23.3	M	M					
	Tuckertown	20	39° 36'	74° 21'W	-0.2	24.5	12.3	1146.8	24.7	13.4	1062.5					
	Atlantic City WSO AP	64	39° 27'	74° 34'W	-0.8	24.6	12.1	984.3	23.9	13.2	1175.3					
	Belleplain St Forest	30	39° 15'	74° 52'W	0.0	24.1	12.4	1037.8	24.2	13.6	932.4					
	Cape May 2NW	17	38° 57'	74° 56'W	0.6	24.3	12.7	1004.3	24.5	13.9	934.7					
	Lewes, DE	15	38° 46'	75° 08'W	1.8	25.2	14.1	1122.2	26.0	15.5	1039.9					
	Georgetown 5SW	45	38° 38'	75° 27'W	0.4	24.8	12.9	1125.0	25.0	14.1	1127.3					
	Kilmarnock 1N, VA	59	37° 43'	76° 23'W	1.6	25.3	13.8	1205.0	25.8	15.3	1064.8					
	Painter 2W	30	37° 35'	75° 49'W	2.8	25.8	14.7	1071.9	26.4	15.9	1655.1					
	Mathews 2ENE	10	37° 27'	76° 17'W	2.5	25.4	14.5	1083.1	25.8	15.7	1148.1					
	Williamsburg 2	70	37° 18'	76° 42'W	2.4	25.6	14.6	1167.6	26.3	16.2	1117.9					
	Norfolk WSO AP	24	36° 54'	76° 12'W	3.7	26.4	15.6	1121.2	27.0	17.1	1009.9					
	Suffolk Lake Kilby	22	36° 44'	76° 36'W	2.9	25.8	14.9	1183.6	26.4	16.4	1156.2					

TABLE 3. (CONT.)

YEAR	STATION	Elevation (ft.)	Latitude	Longitude	1981-1990 Jan. Temp. (°C)	1981-1990 July Temp. (°C)	1981-1990 Mean Ann. Temp. (°C)	1981-1990 (Total Ppt.(mm))	1990 Jan. Temp. (°C)	1990 July Temp. (°C)	1990 Mean Ann. Temp. (°C)	1990 Total Ppt.(mm)
	Elizabeth City, NC	8	36° 19'	76° 12'W	5.1	26.7	16.4	1179.6	9.6	26.9	17.4	1116.6
	Edenton	20	36° 03'	76° 37'W	5.1	26.6	16.3	1222.8	9.8	27.3	17.8	1072.6
	Cape Hatteras WSO	8	35° 16'	75° 33'W	6.8	26.2	17.1	1464.3	11.2	26.5	18.6	1211.3
	Bayboro 3E	10	35° 09'	76° 43'W	6.2	26.7	17.3	1353.1	10.4	M	M	M
	Cedar Island	10	34° 59'	76° 18'W	6.1	26.9	16.3	1444.8	10.3	27.7	18.7	1125.2
	Morehead City 2WNW	10	34° 50'	76° 44'W	6.9	26.9	17.6	1488.7	10.6	27.5	19.1	984.8
	Hofmann Forest	44	34° 44'	77° 18'W	6.8	27.3	17.7	1368.8	12.2	28.9	19.8	929.9
	Willard 4SW	59	34° 39'	78° 02'W	5.9	26.3	16.9	1279.4	10.6	26.4	17.9	1107.2
	Wilmington 7N	40	34° 19'	77° 55'W	6.0	26.7	17.1	1341.4	10.7	27.0	18.3	1076.7
	Wilmington WSO AP	30	34° 16'	77° 54'W	6.2	27.2	17.6	1401.6	11.4	27.6	19.2	1357.1
	Longwood	40	34° 01'	78° 33'W	5.8	26.2	16.7	1267.2	10.2	27.0	18.1	1186.9
	Southport 5N	20	34° 00'	78° 01'W	6.0	26.7	17.2	1446.8	10.1	27.0	18.1	953.5
	Loris 1S, SC	90	34° 03'	78° 53'W	5.7	26.6	16.7	1205.7	10.7	27.3	18.2	1233.4
	Conway	20	33° 50'	79° 03'W	6.8	27.7	17.9	1247.1	11.6	28.2	19.3	1080.8
	Brookgreen Gardens	20	33° 31'	79° 05'W	7.2	27.2	17.9	1340.4	11.1	27.3	19.1	1126.5
	Georgetown 2E	10	33° 21'	79° 15'W	8.1	27.4	18.5	1414.8	13.0	27.8	19.9	1180.8
	McClellanville	10	33° 05'	79° 29'W	7.7	26.9	17.9	1318.0	11.7	27.3	19.4	1118.4
	Charleston WSO AP	10	32° 47'	80° 02'W	8.2	28.0	18.9	1259.8	13.0	28.7	20.7	1146.3
	Sullivan Island	3	32° 46'	79° 51'W	8.9	27.7	19.1	976.6	12.8	28.4	M	1263.1
	Edisto Island 5SW	10	32° 29'	80° 20'W	8.2	27.8	18.4	1289.6	11.5	28.8	M	M
	Beaufort 7SW	20	32° 23'	80° 46'W	9.2	27.9	19.4	1212.1	12.9	28.3	20.6	1028.2
	Hilton Head	15	32° 13'	80° 45'W	9.3	27.6	19.0	1287.0	12.3	27.8	M	M
	Savannah WSO AP, GA	46	32° 08'	81° 12'W	9.2	28.4	19.5	1190.0	13.2	29.1	20.8	895.9
	Fort Stewart	92	31° 52'	81° 37'W	10.0	28.2	19.7	1160.8	14.3	29.0	21.4	835.4
	Sapello Island	10	31° 24'	81° 17'W	9.7	27.6	19.4	1325.9	13.1	28.3	20.8	813.8
	Brunswick	13	31° 10'	81° 30'W	9.9	28.2	20.1	1261.6	14.3	28.7	21.6	895.9
	Folkston 9SW	120	30° 44'	82° 08'W	11.0	27.9	20.6	1281.2	14.9	28.6	21.7	976.1
	Fernandina Beach, FL	13	30° 39'	81° 28'W	11.0	27.8	20.2	1205.0	14.3	28.3	21.7	818.1
	Jacksonville Beach	10	30° 17'	81° 24'W	11.8	27.7	20.9	1201.4	15.1	28.2	21.9	775.0
	St. Augustine WFOY	8	29° 54'	81° 19'W	12.8	27.3	20.8	1199.6	16.2	27.2	21.7	784.9
	Hastings Arc	10	29° 43'	81° 30'W	12.1	27.0	20.4	1278.9	15.3	27.2	21.4	804.4
	Crescent City	55	29° 26'	81° 31'W	13.2	28.2	21.5	1215.9	17.1	27.9	M	M
	Daytona Beach WSO AP	29	29° 11'	81° 03'W	13.5	27.4	21.4	1273.3	17.1	27.7	22.8	917.4
	Deland 1SSE	25	29° 01'	81° 18'W	13.1	27.3	21.1	1522.7	16.1	27.0	21.9	1310.9
	Sandford Exp Sta	15	28° 48'	81° 14'W	14.2	27.6	21.7	1237.2	17.7	27.3	22.7	898.1
	Titusville	5	28° 37'	80° 49'W	14.1	27.4	21.8	1340.1	16.9	27.2	M	1199.9
	Melbourne	35	28° 07'	80° 39'W	15.7	27.3	22.4	1146.0	18.7	27.5	23.4	1219.7
	Vero Beach 4W	20	27° 38'	80° 27'W	16.1	27.5	22.6	1435.4	19.4	27.5	23.5	1247.9
	Stuart 1N	10	27° 13'	80° 15'W	17.9	27.7	23.6	1529.6	20.5	27.7	24.4	1436.1
	West Palm Beach WSO AF	18	26° 41'	80° 07'W	18.5	28.2	24.1	1570.2	22.4	28.5	25.3	1417.6
	Pompano Beach	15	26° 14'	80° 09'W	19.7	28.4	24.9	1521.2	22.9	28.1	25.4	1490.0
	Fort Lauderdale	16	26° 06'	80° 12'W	19.4	28.1	24.4	1538.2	22.6	28.2	25.2	1613.7
	Miami Beach	5	25° 47'	80° 08'W	20.0	28.2	24.5	1264.9	23.5	28.1	M	M
	Royal Palm Ranger Stat	7	25° 23'	80° 36'W	19.8	27.9	24.5	1291.6	22.3	26.7	23.9	1090.4
	Tavernier	7	25° 00'	80° 31'W	20.9	29.4	25.6	1143.3	23.6	29.3	26.3	855.0
	Key West WSO AP	4	24° 33'	81° 45'W	20.5	29.1	25.5	996.2	22.9	29.3	26.3	925.3

YEAR	1989				1989				1988				1988			
STATION	Jan Temp (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)	Jan Temp (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)	Jan Temp (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)	Jan Temp (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)
Eastport, ME	-3.6	17.3	5.9	990.9	-5.1	16.9	6.4	1102.4	-7.7	18.0	M	M	-7.7	18.0	M	M
Jonesboro	-5.7	17.8	5.1	1337.3	-5.9	20.7	7.4	1047.5	-6.5	20.4	7.4	1015.5	-6.5	20.4	7.4	1015.5
Ellsworth	-3.7	19.4	6.3	1207.0	-7.4	20.5	7.1	1370.8	-7.6	20.7	7.1	1112.8	-7.6	20.7	7.1	1112.8
Belfast	-4.4	20.3	6.6	1488.9	-5.4	21.1	7.6	1046.2	-5.4	21.4	M	M	-5.4	21.1	7.6	1046.2
Acadia Natl PK	-4.1	19.9	6.5	1180.1	M	21.4	M	M	M	21.4	M	M	M	21.4	M	M
West Rockport 1W	-3.3	19.8	7.3	1147.3	-5.8	21.7	8.1	1107.9	-5.8	22.9	8.5	1262.1	-5.8	22.9	8.5	1262.1
Brunswick	-3.7	20.8	7.3	1055.4	-5.1	22.4	8.6	1143.5	-5.1	22.2	8.8	1149.9	-5.1	22.2	8.8	1149.9
Portland WSPFO	-2.9	20.8	7.3	1211.8	-4.7	22.3	8.7	1125.7	-4.7	22.3	8.7	1125.7	-4.7	22.3	8.7	1125.7
Sanford 2NNW	-4.1	19.9	6.5	1147.3	-4.2	23.8	9.9	957.3	-4.2	23.8	9.9	957.3	-4.2	23.8	9.9	957.3
Durham, NH	-2.4	21.2	7.9	1054.4	-3.1	23.4	10.1	1001.3	-3.1	23.4	10.1	1001.3	-3.1	23.4	10.1	1001.3
Greenland	-1.4	20.3	7.8	1383.3	-2.8	22.7	9.9	1183.1	-2.8	22.7	9.9	1183.1	-2.8	22.7	9.9	1183.1
Haverhill, MA	M	M	M	1154.7	-3.4	23.6	10.1	1030.0	-3.4	23.6	10.1	1030.0	-3.4	23.6	10.1	1030.0
Middletown	-0.1	21.8	9.0	1173.9	-4.8	22.9	9.3	1090.2	-4.8	22.9	9.3	1090.2	-4.8	22.9	9.3	1090.2
Peabody	0.5	21.4	9.4	1318.5	-3.3	22.0	9.6	1138.9	-3.3	22.0	9.6	1138.9	-3.3	22.0	9.6	1138.9
Hingham	0.6	21.3	9.4	M	-1.3	20.1	9.6	1016.3	-1.3	20.1	9.6	1016.3	-1.3	20.1	9.6	1016.3
Brockton	0.7	21.7	9.6	1444.0	-2.8	23.6	10.4	1122.2	-2.8	23.6	10.4	1122.2	-2.8	23.6	10.4	1122.2
Plymouth-Kingston	-0.6	21.3	8.9	1249.2	-2.2	21.9	9.9	966.7	-2.2	21.9	9.9	966.7	-2.2	21.9	9.9	966.7
East Warcham	0.7	21.0	M	1423.9	-2.9	23.5	10.4	974.6	-2.9	23.5	10.4	974.6	-2.9	23.5	10.4	974.6
Chatham WMSO	1.3	19.6	M	M	-1.4	22.2	10.7	1052.1	-1.4	22.2	10.7	1052.1	-1.4	22.2	10.7	1052.1
New Bedford	0.8	22.8	10.3	1560.3	-3.4	22.4	10.7	1269.7	-3.4	22.4	10.7	1269.7	-3.4	22.4	10.7	1269.7
Edgartown	0.9	20.2	9.6	1485.9	-3.4	22.4	10.7	1264.7	-3.4	22.4	10.7	1264.7	-3.4	22.4	10.7	1264.7
Providence WSO AP, RI	1.0	22.4	10.2	M	-3.6	22.4	M	960.6	-3.6	22.4	M	960.6	-3.6	22.4	M	960.6
Newport	1.9	21.9	M	1457.2	-0.7	26.1	M	985.5	-0.7	26.1	M	985.5	-0.7	26.1	M	985.5
Kingston	0.5	21.3	9.3	1283.2	-3.1	24.2	10.8	1155.2	-3.1	24.2	10.8	1155.2	-3.1	24.2	10.8	1155.2
Middletown 4W, CT	0.6	23.1	10.4	M	-3.6	24.5	10.7	1155.7	-3.6	24.5	10.7	1155.7	-3.6	24.5	10.7	1155.7
Groton	0.3	21.5	M	1588.5	-2.4	22.8	10.3	1134.1	-2.4	22.8	10.3	1134.1	-2.4	22.8	10.3	1134.1
New Haven	3.1	24.8	M	1581.2	-2.2	23.9	11.1	1071.1	-2.2	23.9	11.1	1071.1	-2.2	23.9	11.1	1071.1
Bridgeport WSO AP	1.0	22.1	10.4	1753.6	-2.2	24.7	12.1	828.8	-2.2	24.7	12.1	828.8	-2.2	24.7	12.1	828.8
Stamford 5N	M	22.6	M	M	-3.0	24.4	M	1003.6	-3.0	24.4	M	1003.6	-3.0	24.4	M	1003.6
Bridgchampton, NY	1.2	21.4	10.1	1444.2	-1.6	25.2	11.8	1000.8	-1.6	25.2	11.8	1000.8	-1.6	25.2	11.8	1000.8
Riverhead Res Far	2.2	23.4	11.6	1500.6	-2.3	25.1	11.3	850.4	-2.3	25.1	11.3	850.4	-2.3	25.1	11.3	850.4
Patchogue 2N	1.7	22.9	11.1	1280.4	-1.8	25.2	11.9	945.4	-1.8	25.2	11.9	945.4	-1.8	25.2	11.9	945.4
Long Branch Oakhurst, NJ	3.5	23.1	M	1272.8	-0.8	23.9	12.1	947.9	-0.8	23.9	12.1	947.9	-0.8	23.9	12.1	947.9
Toms River	1.4	22.3	10.4	1320.5	0.2	26.0	13.5	934.7	0.2	26.0	13.5	934.7	0.2	26.0	13.5	934.7
Tuckertown	2.9	24.0	11.9	1631.4	-0.9	25.7	12.6	941.3	-0.9	25.7	12.6	941.3	-0.9	25.7	12.6	941.3
Atlantic City WSO AP	2.4	23.3	11.5	1616.5	-1.4	26.7	12.9	847.1	-1.4	26.7	12.9	847.1	-1.4	26.7	12.9	847.1
Belleplain St Forest	3.5	23.5	12.3	1445.5	1.7	26.0	14.1	998.0	1.7	26.0	14.1	998.0	1.7	26.0	14.1	998.0
Cape May 2NW	3.6	23.9	12.5	1445.5	0.9	25.4	13.8	1020.1	0.9	25.4	13.8	1020.1	0.9	25.4	13.8	1020.1
Lewes, DE	4.9	25.1	13.8	1307.6	2.9	26.2	15.1	982.5	2.9	26.2	15.1	982.5	2.9	26.2	15.1	982.5
Georgetown 5SW	4.0	24.3	12.7	1392.4	2.0	25.6	14.5	1100.6	2.0	25.6	14.5	1100.6	2.0	25.6	14.5	1100.6
Kilmarnock 1N, VA	4.9	24.8	13.6	1623.6	1.7	26.0	14.5	1623.6	1.7	26.0	14.5	1623.6	1.7	26.0	14.5	1623.6
Painter 2W	5.9	25.4	14.5	M	-1.4	26.7	12.9	M	-1.4	26.7	12.9	M	-1.4	26.7	12.9	M
Mathews 2ENE	5.8	25.2	14.4	M	0.9	25.4	13.8	M	0.9	25.4	13.8	M	0.9	25.4	13.8	M
Williamsburg 2	6.2	25.3	14.5	M	0.3	26.2	13.9	M	0.3	26.2	13.9	M	0.3	26.2	13.9	M
Norfolk WSO AP	7.4	26.2	15.6	M	2.9	26.7	15.1	M	2.9	26.7	15.1	M	2.9	26.7	15.1	M
Suffolk Lake Kilby	6.9	25.3	14.3	M	2.0	25.6	14.5	M	2.0	25.6	14.5	M	2.0	25.6	14.5	M

YEAR	STATION	1989			1989			1988			1988		
		Jan Temp (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	Mean Ann. Temp. (°C)	Total Ppt (mm)	Total Ppt (mm)	Jan Temp (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	Jan Temp (°C)	July Temp (°C)	Total Ppt (mm)
	Elizabeth City, NC	8.3	26.3	16.4	16.4	1504.4	1504.4	4.1	26.2	15.8	4.1	26.2	1075.2
	Edenton	8.4	25.8	16.2	16.2	1708.9	1708.9	3.9	26.6	15.7	3.9	26.6	1168.4
	Cape Hatteras WSO	10.4	26.2	17.4	17.4	2307.3	2307.3	6.3	25.7	16.6	6.3	25.7	1073.7
	Bayboro 3E	9.7	26.2	M	M	M	M	4.6	26.4	16.1	4.6	26.4	M
	Cedar Island	9.8	26.6	17.4	17.4	1940.8	1940.8	4.8	26.6	16.5	4.8	26.6	1259.3
	Morehead City 2WNW	10.2	26.5	17.5	17.5	1841.2	1841.2	5.4	25.9	16.7	5.4	25.9	1368.8
	Hofmann Forest	11.1	28.1	18.4	18.4	1685.0	1685.0	6.1	27.2	17.6	6.1	27.2	1164.3
	Willard 4SW	9.3	26.2	16.7	16.7	1448.6	1448.6	3.9	25.5	15.8	3.9	25.5	1143.3
	Wilmington 7N	9.3	26.2	16.6	16.6	1440.2	1440.2	4.2	26.2	16.3	4.2	26.2	1238.0
	Wilmington WSO AP	10.9	26.9	17.6	17.6	1692.9	1692.9	5.1	26.6	16.7	5.1	26.6	1471.4
	Longwood	9.3	M	M	M	1330.7	1330.7	3.9	25.9	M	3.9	25.9	1046.5
	Southport 5N	9.8	M	M	M	M	M	3.8	25.6	M	3.8	25.6	M
	Loris 1S, SC	9.2	26.3	16.6	16.6	1361.7	1361.7	3.3	25.9	15.7	3.3	25.9	864.9
	Conway	10.2	27.4	17.5	17.5	1354.3	1354.3	4.6	26.8	16.9	4.6	26.8	1212.6
	Brookgreen Gardens	10.9	27.0	17.7	17.7	1527.3	1527.3	5.1	26.8	17.0	5.1	26.8	1073.7
	Georgetown 2E	11.4	27.4	M	M	1714.2	1714.2	5.7	26.8	17.7	5.7	26.8	1293.4
	McClallanville	11.9	26.8	M	M	M	M	5.8	26.6	17.2	5.8	26.6	980.9
	Charleston WSO AP	12.9	28.2	19.3	19.3	1423.9	1423.9	6.2	27.7	18.2	6.2	27.7	1081.3
	Sullivan Island	12.3	27.0	M	M	M	M	6.4	26.8	17.9	6.4	26.8	1285.7
	Edisto Island 5SW	11.9	27.9	M	M	1360.9	1360.9	M	27.5	M	M	27.5	1148.3
	Beaufort 7SW	13.6	27.9	19.4	19.4	1312.2	1312.2	6.9	27.5	M	6.9	27.5	M
	Hilton Head	13.1	27.2	M	M	1180.1	1180.1	6.9	26.8	18.1	6.9	26.8	1529.6
	Savannah WSO AP, GA	13.7	28.3	19.4	19.4	1191.0	1191.0	7.2	28.2	18.7	7.2	28.2	1223.5
	Fort Stewart	13.7	27.7	19.4	19.4	1231.9	1231.9	7.7	27.7	18.6	7.7	27.7	1189.0
	Sapello Island	13.5	27.7	19.2	19.2	1496.1	1496.1	7.8	27.2	18.8	7.8	27.2	1185.2
	Brunswick	14.8	28.1	20.2	20.2	1219.7	1219.7	8.2	27.8	19.2	8.2	27.8	1247.9
	Folkston 9SW	15.4	27.9	20.7	20.7	1178.8	1178.8	7.7	27.8	19.8	7.7	27.8	1522.5
	Fernandina Beach, FL	16.2	29.7	M	M	1048.3	1048.3	9.4	27.1	20.0	9.4	27.1	1316.7
	Jacksonville Beach	M	27.3	M	M	1238.8	1238.8	9.9	27.3	M	9.9	27.3	1177.0
	St. Augustine WFOY	16.8	27.2	20.8	20.8	1195.6	1195.6	11.0	26.6	19.9	11.0	26.6	1233.2
	Hastings Arc	16.9	27.2	20.7	20.7	1035.3	1035.3	10.6	26.7	19.8	10.6	26.7	1252.0
	Crescent City	18.4	28.2	21.8	21.8	1086.1	1086.1	11.9	27.7	21.0	11.9	27.7	1213.9
	Daytona Beach WSO AP	18.2	28.2	21.9	21.9	1134.1	1134.1	12.8	27.3	20.9	12.8	27.3	1039.1
	Deland 1SSE	17.8	27.4	21.2	21.2	1415.5	1415.5	12.2	26.4	20.2	12.2	26.4	1545.1
	Sandford Exp Sta	19.1	27.6	22.0	22.0	1032.5	1032.5	12.8	26.8	20.8	12.8	26.8	1525.3
	Titusville	19.3	28.1	22.6	22.6	1151.4	1151.4	12.8	26.7	21.2	12.8	26.7	1518.9
	Melbourne	19.4	27.3	22.7	22.7	1091.9	1091.9	15.7	26.8	M	15.7	26.8	M
	Vero Beach 4W	19.4	27.3	22.6	22.6	1156.5	1156.5	16.8	27.3	22.2	16.8	27.3	1135.1
	Stuart 1N	20.9	27.8	M	M	M	M	18.4	27.6	23.4	18.4	27.6	1304.8
	West Palm Beach WSO AF	21.8	28.3	24.4	24.4	982.0	982.0	19.1	27.9	24.0	19.1	27.9	1648.7
	Pompano Beach	22.8	28.1	24.8	24.8	M	M	20.4	28.3	24.8	20.4	28.3	1123.7
	Fort Lauderdale	22.2	27.8	24.6	24.6	1005.1	1005.1	21.1	28.1	24.6	21.1	28.1	1032.8
	Miami Beach	22.8	27.9	24.8	24.8	758.4	758.4	19.7	27.7	24.3	19.7	27.7	975.4
	Royal Palm Ranger Stat	23.6	26.6	24.4	24.4	927.1	927.1	21.9	28.9	25.6	21.9	28.9	M
	Tavernier	23.8	M	M	M	693.4	693.4	20.9	28.9	25.4	20.9	28.9	1321.3
	Key West WSO AP	23.4	28.8	25.9	25.9	791.5	791.5	20.6	29.0	25.2	20.6	29.0	928.6

TABLE 3. (CONT.)

YEAR	1987				1987				1986				1986				1986			
STATION	Jan. Temp. (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	Tot. Ppt. (mm)	Jan. Temp. (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	Tot. Ppt. (mm)	Jan. Temp. (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	Tot. Ppt. (mm)	Jan. Temp. (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	Tot. Ppt. (mm)	Jan. Temp. (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	Tot. Ppt. (mm)
Eastport, ME	-5.9	16.9	6.1	1099.1	-4.4	16.5	5.9	1085.3	-4.4	16.5	5.9	1085.3	-4.4	16.5	5.9	1085.3	-4.4	16.5	5.9	1085.3
Jonesboro	-7.9	17.6	5.9	1333.5	-5.1	17.1	5.8	1238.5	-5.1	17.1	5.8	1238.5	-5.1	17.1	5.8	1238.5	-5.1	17.1	5.8	1238.5
Ellsworth	-6.8	19.2	7.2	934.0	-4.4	17.1	6.9	1229.4	-4.4	17.1	6.9	1229.4	-4.4	17.1	6.9	1229.4	-4.4	17.1	6.9	1229.4
Belfast	-7.0	19.0	7.1	1085.6	-4.4	18.3	6.8	M	-4.4	18.3	6.8	M	-4.4	18.3	6.8	M	-4.4	18.3	6.8	M
Acadia Natl PK	-7.4	18.7	6.7	1271.5	-4.9	17.9	6.6	1461.5	-4.9	17.9	6.6	1461.5	-4.9	17.9	6.6	1461.5	-4.9	17.9	6.6	1461.5
West Rockport 1W	-7.8	17.6	6.0	1152.9	-6.3	17.2	5.6	1301.2	-6.3	17.2	5.6	1301.2	-6.3	17.2	5.6	1301.2	-6.3	17.2	5.6	1301.2
New Castle	-6.2	18.9	7.4	1118.6	-4.4	18.8	7.2	1187.5	-4.4	18.8	7.2	1187.5	-4.4	18.8	7.2	1187.5	-4.4	18.8	7.2	1187.5
Brunswick	-6.2	M	M	M	-5.1	19.9	7.6	1037.6	-5.1	19.9	7.6	1037.6	-5.1	19.9	7.6	1037.6	-5.1	19.9	7.6	1037.6
Portland WSFO	-5.8	20.0	7.7	1035.8	-3.9	18.9	7.6	1128.8	-3.9	18.9	7.6	1128.8	-3.9	18.9	7.6	1128.8	-3.9	18.9	7.6	1128.8
Sanford 2NNW	-6.6	21.1	M	M	-3.8	19.8	-17.8	1190.5	-3.8	19.8	-17.8	1190.5	-3.8	19.8	-17.8	1190.5	-3.8	19.8	-17.8	1190.5
Durham, NH	-5.8	21.1	8.2	1015.5	-3.7	19.9	8.2	1051.1	-3.7	19.9	8.2	1051.1	-3.7	19.9	8.2	1051.1	-3.7	19.9	8.2	1051.1
Greenland	-4.7	20.6	8.4	1183.6	-2.8	20.1	8.3	1286.5	-2.8	20.1	8.3	1286.5	-2.8	20.1	8.3	1286.5	-2.8	20.1	8.3	1286.5
Haverhill, MA	-5.0	20.7	8.2	1136.7	-2.8	20.1	8.2	1271.0	-2.8	20.1	8.2	1271.0	-2.8	20.1	8.2	1271.0	-2.8	20.1	8.2	1271.0
Middletown	-3.7	21.1	9.2	1154.9	-1.5	21.0	9.4	1211.3	-1.5	21.0	9.4	1211.3	-1.5	21.0	9.4	1211.3	-1.5	21.0	9.4	1211.3
Peabody	-2.0	22.6	10.0	1159.3	0.1	21.4	10.3	1216.7	0.1	21.4	10.3	1216.7	0.1	21.4	10.3	1216.7	0.1	21.4	10.3	1216.7
Hingham	-2.2	21.7	9.7	1290.3	-0.3	20.4	9.7	1313.2	-0.3	20.4	9.7	1313.2	-0.3	20.4	9.7	1313.2	-0.3	20.4	9.7	1313.2
Brockton	-2.2	22.8	10.2	1122.9	-0.8	21.2	9.9	1411.2	-0.8	21.2	9.9	1411.2	-0.8	21.2	9.9	1411.2	-0.8	21.2	9.9	1411.2
Plymouth-Kingston	-2.7	21.1	8.6	1307.8	-1.3	20.4	8.9	1283.5	-1.3	20.4	8.9	1283.5	-1.3	20.4	8.9	1283.5	-1.3	20.4	8.9	1283.5
East Warcham	-1.2	21.3	M	1200.9	-0.8	20.8	9.4	1317.2	-0.8	20.8	9.4	1317.2	-0.8	20.8	9.4	1317.2	-0.8	20.8	9.4	1317.2
Chatham WMSO	0.3	19.1	M	M	0.4	19.7	M	M	0.4	19.7	M	M	0.4	19.7	M	M	0.4	19.7	M	M
New Bedford	0.3	23.0	11.1	1254.3	1.0	21.4	11.0	1396.2	1.0	21.4	11.0	1396.2	1.0	21.4	11.0	1396.2	1.0	21.4	11.0	1396.2
Edgartown	-0.6	20.7	M	M	0.2	20.1	9.9	1412.7	0.2	20.1	9.9	1412.7	0.2	20.1	9.9	1412.7	0.2	20.1	9.9	1412.7
Providence WSO AP, RI	-1.7	22.3	10.4	1033.0	-0.5	21.7	10.4	1171.7	-0.5	21.7	10.4	1171.7	-0.5	21.7	10.4	1171.7	-0.5	21.7	10.4	1171.7
Newport	-0.7	21.9	10.6	1105.4	0.3	20.8	10.3	1238.5	0.3	20.8	10.3	1238.5	0.3	20.8	10.3	1238.5	0.3	20.8	10.3	1238.5
Kingston	-2.1	21.9	9.8	1110.0	-0.5	20.6	9.7	1355.9	-0.5	20.6	9.7	1355.9	-0.5	20.6	9.7	1355.9	-0.5	20.6	9.7	1355.9
Middletown 4W, CT	-2.3	24.1	10.9	1053.8	-0.7	23.0	10.8	1127.8	-0.7	23.0	10.8	1127.8	-0.7	23.0	10.8	1127.8	-0.7	23.0	10.8	1127.8
Groton	-1.4	22.3	10.2	976.1	-0.6	21.2	10.2	1407.4	-0.6	21.2	10.2	1407.4	-0.6	21.2	10.2	1407.4	-0.6	21.2	10.2	1407.4
New Haven	1.1	25.9	M	1066.5	M	23.7	M	M	M	23.7	M	M	M	23.7	M	M	M	23.7	M	M
Bridgeport WSO AP	-1.1	23.8	11.1	873.0	-0.8	22.8	10.9	856.7	-0.8	22.8	10.9	856.7	-0.8	22.8	10.9	856.7	-0.8	22.8	10.9	856.7
Stamford 5N	-1.5	24.1	11.1	1256.3	-0.9	22.6	10.8	1175.5	-0.9	22.6	10.8	1175.5	-0.9	22.6	10.8	1175.5	-0.9	22.6	10.8	1175.5
Bridgehampton, NY	-0.8	22.2	10.4	1272.5	0.1	21.5	10.4	1154.4	0.1	21.5	10.4	1154.4	0.1	21.5	10.4	1154.4	0.1	21.5	10.4	1154.4
Riverhead Res Far	0.1	24.7	12.1	1053.6	0.4	23.3	11.8	1116.8	0.4	23.3	11.8	1116.8	0.4	23.3	11.8	1116.8	0.4	23.3	11.8	1116.8
Pachogue 2N	-0.5	24.1	11.6	1037.6	0.3	23.4	11.5	1188.5	0.3	23.4	11.5	1188.5	0.3	23.4	11.5	1188.5	0.3	23.4	11.5	1188.5
Long Branch Oakhurst, NJ	0.2	24.1	M	M	1.0	23.4	12.0	1208.0	1.0	23.4	12.0	1208.0	1.0	23.4	12.0	1208.0	1.0	23.4	12.0	1208.0
Toms River	-0.4	24.9	11.8	1092.7	0.0	23.4	11.8	1213.6	0.0	23.4	11.8	1213.6	0.0	23.4	11.8	1213.6	0.0	23.4	11.8	1213.6
Tuckertown	0.2	25.3	12.2	1253.5	0.7	24.7	12.4	1181.1	0.7	24.7	12.4	1181.1	0.7	24.7	12.4	1181.1	0.7	24.7	12.4	1181.1
Atlantic City WSO AP	-0.2	24.8	11.8	1049.3	0.3	24.4	12.1	1030.7	0.3	24.4	12.1	1030.7	0.3	24.4	12.1	1030.7	0.3	24.4	12.1	1030.7
Belleplain St Forest	0.4	25.2	12.7	893.6	0.6	25.0	M	M	0.6	25.0	M	M	0.6	25.0	M	M	0.6	25.0	M	M
Cape May 2NW	1.2	25.1	12.9	839.2	1.3	25.5	12.9	879.3	1.3	25.5	12.9	879.3	1.3	25.5	12.9	879.3	1.3	25.5	12.9	879.3
Lewes, DE	1.8	26.4	13.8	968.8	2.8	26.8	14.3	958.9	2.8	26.8	14.3	958.9	2.8	26.8	14.3	958.9	2.8	26.8	14.3	958.9
Georgetown 5SW	0.1	25.8	12.9	990.6	1.0	25.7	13.2	886.5	1.0	25.7	13.2	886.5	1.0	25.7	13.2	886.5	1.0	25.7	13.2	886.5
Kilmarnock 1N, VA	1.3	25.4	13.1	1110.0	2.6	26.3	14.1	824.2	2.6	26.3	14.1	824.2	2.6	26.3	14.1	824.2	2.6	26.3	14.1	824.2
Painter 2W	3.3	26.9	14.7	914.7	3.5	27.1	15.0	814.8	3.5	27.1	15.0	814.8	3.5	27.1	15.0	814.8	3.5	27.1	15.0	814.8
Mathews 2ENE	2.7	26.2	14.2	1003.8	3.5	26.4	14.7	819.9	3.5	26.4	14.7	819.9	3.5	26.4	14.7	819.9	3.5	26.4	14.7	819.9
Williamsburg 2	1.7	26.1	13.9	1124.2	3.2	26.8	15.0	946.7	3.2	26.8	15.0	946.7	3.2	26.8	15.0	946.7	3.2	26.8	15.0	946.7
Norfolk WSO AP	4.2	26.4	15.5	1135.1	4.1	27.8	15.9	672.6	4.1	27.8	15.9	672.6	4.1	27.8	15.9	672.6	4.1	27.8	15.9	672.6
Suffolk Lake Kilby	3.1	26.9	15.0	1346.7	3.0	27.3	15.4	738.9	3.0	27.3	15.4	738.9	3.0	27.3	15.4	738.9	3.0	27.3	15.4	738.9

TABLE 3. (CONT.)

YEAR	1987			1987			1987			1986			1986			1986		
STATION	Jan. Temp. (°C)	July Temp (°C)	Mean Ann. Temp. (°C)	1987	July Temp (°C)	Mean Ann. Temp. (°C)	Tot. Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	1986	July Temp. (°C)	Mean Ann. Temp. (°C)	1986	July Temp. (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)	
Elizabeth City, NC	5.6	27.6	15.9	1071.6	27.6	15.9	1071.6	5.3	27.9	16.9	5.3	27.5	16.8	5.3	27.5	16.8	926.6	
Edenton	5.4	27.1	16.2	1185.9	27.1	16.2	1185.9	5.3	27.5	16.8	5.3	27.5	16.8	5.3	27.5	16.8	897.1	
Cape Hatteras WSO	7.8	26.7	16.6	1548.4	26.7	16.6	1548.4	7.1	27.2	17.7	7.1	27.2	17.7	7.1	27.2	17.7	1241.0	
Bayboro 3E	6.6	26.8	16.6	1460.0	26.8	16.6	1460.0	6.2	27.9	M	6.2	27.9	M	6.2	27.9	M	1066.8	
Cedar Island	6.7	27.2	16.7	1403.6	27.2	16.7	1403.6	5.9	28.4	17.8	5.9	28.4	17.8	5.9	28.4	17.8	996.2	
Morhead City 2WNW	7.7	27.3	17.4	1410.7	27.3	17.4	1410.7	7.2	28.6	18.3	7.2	28.6	18.3	7.2	28.6	18.3	1257.8	
Hofmann Forest	6.3	26.4	17.2	1418.8	26.4	17.2	1418.8	6.1	27.5	17.2	6.1	27.5	17.2	6.1	27.5	17.2	1380.5	
Willard 4SW	6.2	26.6	16.5	1436.6	26.6	16.5	1436.6	5.8	27.1	17.6	5.8	27.1	17.6	5.8	27.1	17.6	1265.7	
Wilmington 7N	6.1	27.2	16.6	1419.4	27.2	16.6	1419.4	5.6	28.1	17.5	5.6	28.1	17.5	5.6	28.1	17.5	1321.8	
Wilmington WSO AP	7.2	27.7	17.4	1301.8	27.7	17.4	1301.8	6.8	28.9	18.5	6.8	28.9	18.5	6.8	28.9	18.5	1509.0	
Longwood	6.3	26.9	16.5	1246.4	26.9	16.5	1246.4	5.4	28.0	17.5	5.4	28.0	17.5	5.4	28.0	17.5	1191.3	
Southport 5N	6.4	27.1	M	1730.0	27.1	M	1730.0	5.0	28.3	M	5.0	28.3	M	5.0	28.3	M	M	
Loris 1S, SC	6.0	26.5	16.2	1339.9	26.5	16.2	1339.9	5.2	27.9	17.4	5.2	27.9	17.4	5.2	27.9	17.4	1141.5	
Conway	6.9	27.9	17.6	1394.0	27.9	17.6	1394.0	7.1	29.4	18.7	7.1	29.4	18.7	7.1	29.4	18.7	1069.1	
Brookgreen Gardens	7.5	27.5	17.7	1690.9	27.5	17.7	1690.9	7.0	29.2	18.7	7.0	29.2	18.7	7.0	29.2	18.7	1339.3	
Georgetown 2E	7.9	27.9	18.1	1530.9	27.9	18.1	1530.9	7.7	29.1	19.2	7.7	29.1	19.2	7.7	29.1	19.2	1007.4	
McClellanville	7.9	27.3	17.8	1546.1	27.3	17.8	1546.1	7.4	28.0	M	7.4	28.0	M	7.4	28.0	M	1240.3	
Charleston WSO AP	8.4	28.3	18.7	1440.2	28.3	18.7	1440.2	7.7	30.1	19.8	7.7	30.1	19.8	7.7	30.1	19.8	1230.1	
Sullivan's Island	9.0	27.6	M	M	27.6	M	M	8.7	28.9	19.9	8.7	28.9	19.9	8.7	28.9	19.9	1059.4	
Edisto Island SSW	7.9	28.2	18.7	1208.8	28.2	18.7	1208.8	7.8	29.4	19.3	7.8	29.4	19.3	7.8	29.4	19.3	1230.4	
Beaufort 7SW	9.2	28.0	18.9	1347.5	28.0	18.9	1347.5	9.0	29.4	20.1	9.0	29.4	20.1	9.0	29.4	20.1	1292.1	
Hilton Head	8.9	27.7	M	1355.3	27.7	M	1355.3	9.3	M	M	9.3	M	M	9.3	M	M	1266.4	
Savannah WSO AP, GA	9.4	28.7	19.2	1440.2	28.7	19.2	1440.2	8.7	29.8	20.4	8.7	29.8	20.4	8.7	29.8	20.4	1151.4	
Fort Stewart	9.9	28.5	19.4	1292.6	28.5	19.4	1292.6	9.9	29.7	20.6	9.9	29.7	20.6	9.9	29.7	20.6	1120.4	
Sapello Island	10.2	27.4	19.2	1544.8	27.4	19.2	1544.8	10.4	28.8	20.4	10.4	28.8	20.4	10.4	28.8	20.4	1463.3	
Brunswick	9.9	28.3	M	M	28.3	M	M	9.8	29.6	20.8	9.8	29.6	20.8	9.8	29.6	20.8	1290.3	
Folkston 9SW	11.3	27.8	19.9	1221.7	27.8	19.9	1221.7	11.6	29.3	21.3	11.6	29.3	21.3	11.6	29.3	21.3	1490.0	
Fernandina Beach, FL	11.1	27.8	19.8	1074.2	27.8	19.8	1074.2	10.9	28.8	20.9	10.9	28.8	20.9	10.9	28.8	20.9	1230.9	
Jacksonville Beach	12.1	28.4	M	M	28.4	M	M	12.7	M	M	12.7	M	M	12.7	M	M	1054.4	
St. Augustine WFOY	12.3	27.8	M	M	27.8	M	M	13.0	28.6	M	13.0	28.6	M	13.0	28.6	M	M	
Hastings Arc	11.9	26.7	M	M	26.7	M	M	12.2	27.4	20.9	12.2	27.4	20.9	12.2	27.4	20.9	1092.7	
Crescent City	12.6	28.1	21.3	1082.0	28.1	21.3	1082.0	12.4	27.4	M	12.4	27.4	M	12.4	27.4	M	1183.6	
Daytona Beach WSO AP	13.2	27.7	21.1	1161.3	27.7	21.1	1161.3	13.7	27.4	21.9	13.7	27.4	21.9	13.7	27.4	21.9	1219.5	
Deland 1SSE	13.3	27.4	20.8	1656.3	27.4	20.8	1656.3	13.6	27.2	M	13.6	27.2	M	13.6	27.2	M	M	
Sandford Exp Sta	14.2	27.9	21.3	1174.2	27.9	21.3	1174.2	14.5	27.7	22.3	14.5	27.7	22.3	14.5	27.7	22.3	1115.1	
Titusville	14.0	27.6	21.2	1278.1	27.6	21.2	1278.1	14.4	27.6	22.5	14.4	27.6	22.5	14.4	27.6	22.5	1025.4	
Melbourne	15.4	27.8	M	M	27.8	M	M	15.5	27.4	M	15.5	27.4	M	15.5	27.4	M	M	
Vero Beach 4W	15.8	27.8	22.4	1352.0	27.8	22.4	1352.0	15.8	27.4	22.9	15.8	27.4	22.9	15.8	27.4	22.9	1595.9	
Stuart 1N	17.8	27.8	23.4	1210.8	27.8	23.4	1210.8	17.8	27.6	23.7	17.8	27.6	23.7	17.8	27.6	23.7	1541.3	
West Palm Beach WSO AF	18.1	28.4	24.0	1490.7	28.4	24.0	1490.7	17.9	27.8	24.3	17.9	27.8	24.3	17.9	27.8	24.3	1760.5	
Pompano Beach	19.9	29.3	25.2	1246.1	29.3	25.2	1246.1	19.1	29.1	25.3	19.1	29.1	25.3	19.1	29.1	25.3	1534.2	
Fort Lauderdale	19.2	28.6	M	1487.9	28.6	M	1487.9	18.8	27.8	24.6	18.8	27.8	24.6	18.8	27.8	24.6	1629.2	
Miami Beach	19.4	28.8	24.4	1374.6	28.8	24.4	1374.6	19.8	28.2	24.8	19.8	28.2	24.8	19.8	28.2	24.8	1362.5	
Royal Palm Ranger Stat	20.6	28.9	25.4	1101.1	28.9	25.4	1101.1	20.2	28.5	25.3	20.2	28.5	25.3	20.2	28.5	25.3	1037.8	
Tavernier	20.4	30.1	M	M	30.1	M	M	M	29.8	M	M	29.8	M	M	29.8	M	M	
Key West WSO AP	20.5	29.5	25.3	1242.1	29.5	25.3	1242.1	19.9	29.6	25.7	19.9	29.6	25.7	19.9	29.6	25.7	1036.8	

TABLE 3. (CONT.)

YEAR	1985			1985			1985			1984			1984			1984		
STATION	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)
Eastport, ME	-9.4	17.5	709.4	-9.4	17.5	709.4	-6.4	18.0	1189.2	-6.4	18.0	1189.2	-6.4	18.0	1189.2	-6.4	18.0	1189.2
Jonesboro	-10.6	18.3	1139.2	-10.6	18.3	1139.2	-8.4	18.7	1262.4	-8.4	18.7	1262.4	-8.4	18.7	1262.4	-8.4	18.7	1262.4
Ellsworth	M	19.7	M	M	19.7	M	-7.2	20.3	M	-7.2	20.3	M	-7.2	20.3	M	-7.2	20.3	M
Belfast	-8.2	20.8	1008.4	-8.2	20.8	1008.4	-7.2	21.1	1286.8	-7.2	21.1	1286.8	-7.2	21.1	1286.8	-7.2	21.1	1286.8
Acadia Natl PK	-9.5	20.1	1127.3	-9.5	20.1	1127.3	-7.1	20.3	1497.8	-7.1	20.3	1497.8	-7.1	20.3	1497.8	-7.1	20.3	1497.8
West Rockport 1W	-10.1	19.1	1016.0	-10.1	19.1	1016.0	-8.4	19.3	1457.7	-8.4	19.3	1457.7	-8.4	19.3	1457.7	-8.4	19.3	1457.7
New Castle	-8.6	20.3	858.8	-8.6	20.3	858.8	-6.6	20.7	1220.7	-6.6	20.7	1220.7	-6.6	20.7	1220.7	-6.6	20.7	1220.7
Brunswick	-8.4	20.0	913.1	-8.4	20.0	913.1	-7.6	21.0	1176.8	-7.6	21.0	1176.8	-7.6	21.0	1176.8	-7.6	21.0	1176.8
Portland WSO	-8.8	21.0	863.9	-8.8	21.0	863.9	-6.6	20.9	1223.5	-6.6	20.9	1223.5	-6.6	20.9	1223.5	-6.6	20.9	1223.5
Sanford 2NNW	-8.3	21.6	1052.3	-8.3	21.6	1052.3	-6.3	21.3	1318.0	-6.3	21.3	1318.0	-6.3	21.3	1318.0	-6.3	21.3	1318.0
Durham, NH	-7.8	20.4	762.0	-7.8	20.4	762.0	-6.3	21.1	1140.2	-6.3	21.1	1140.2	-6.3	21.1	1140.2	-6.3	21.1	1140.2
Greenland	-7.2	21.3	1020.3	-7.2	21.3	1020.3	-5.6	21.8	1368.0	-5.6	21.8	1368.0	-5.6	21.8	1368.0	-5.6	21.8	1368.0
Haverhill, MA	-7.3	21.6	1011.2	-7.3	21.6	1011.2	-5.4	21.8	1279.9	-5.4	21.8	1279.9	-5.4	21.8	1279.9	-5.4	21.8	1279.9
Middletown	-5.9	21.7	1020.6	-5.9	21.7	1020.6	-4.2	22.0	1289.1	-4.2	22.0	1289.1	-4.2	22.0	1289.1	-4.2	22.0	1289.1
Peabody	-4.2	23.4	1064.3	-4.2	23.4	1064.3	-3.0	23.1	1349.0	-3.0	23.1	1349.0	-3.0	23.1	1349.0	-3.0	23.1	1349.0
Hingham	-4.9	21.7	952.2	-4.9	21.7	952.2	-3.5	22.7	1034.5	-3.5	22.7	1034.5	-3.5	22.7	1034.5	-3.5	22.7	1034.5
Brockton	-4.8	22.6	942.6	-4.8	22.6	942.6	-3.7	22.7	1423.9	-3.7	22.7	1423.9	-3.7	22.7	1423.9	-3.7	22.7	1423.9
Plymouth-Kingston	-5.9	21.4	1057.4	-5.9	21.4	1057.4	-4.3	21.6	1229.1	-4.3	21.6	1229.1	-4.3	21.6	1229.1	-4.3	21.6	1229.1
East Warcham	-4.6	21.9	1119.1	-4.6	21.9	1119.1	-2.5	21.8	1234.7	-2.5	21.8	1234.7	-2.5	21.8	1234.7	-2.5	21.8	1234.7
Chatham WMSO	-2.2	19.6	M	-2.2	19.6	M	-0.3	19.7	10.1	-0.3	19.7	10.1	-0.3	19.7	10.1	-0.3	19.7	10.1
New Bedford	-3.7	21.9	M	-3.7	21.9	M	-2.2	21.8	10.6	-2.2	21.8	10.6	-2.2	21.8	10.6	-2.2	21.8	10.6
Edgartown	-3.1	21.2	1121.7	-3.1	21.2	1121.7	-1.3	21.3	1272.3	-1.3	21.3	1272.3	-1.3	21.3	1272.3	-1.3	21.3	1272.3
Providence WSO AP, RI	-5.3	22.8	1026.7	-5.3	22.8	1026.7	-3.1	21.9	1238.0	-3.1	21.9	1238.0	-3.1	21.9	1238.0	-3.1	21.9	1238.0
Newport	-2.9	21.6	1131.3	-2.9	21.6	1131.3	-1.0	21.3	1337.1	-1.0	21.3	1337.1	-1.0	21.3	1337.1	-1.0	21.3	1337.1
Kingston	-4.6	21.3	1254.3	-4.6	21.3	1254.3	-3.2	21.4	1380.2	-3.2	21.4	1380.2	-3.2	21.4	1380.2	-3.2	21.4	1380.2
Middletown 4W, CT	-3.4	23.0	1098.6	-3.4	23.0	1098.6	-3.6	22.4	1291.8	-3.6	22.4	1291.8	-3.6	22.4	1291.8	-3.6	22.4	1291.8
Groton	-4.2	22.1	1242.1	-4.2	22.1	1242.1	-3.2	22.1	1311.1	-3.2	22.1	1311.1	-3.2	22.1	1311.1	-3.2	22.1	1311.1
New Haven	-2.3	M	M	-2.3	M	M	-2.6	21.9	M	-2.6	21.9	M	-2.6	21.9	M	-2.6	21.9	M
Bridgeport WSO AP	-3.2	23.1	910.6	-3.2	23.1	910.6	-3.0	22.8	1091.2	-3.0	22.8	1091.2	-3.0	22.8	1091.2	-3.0	22.8	1091.2
Stamford 5N	-4.3	21.6	1098.3	-4.3	21.6	1098.3	-3.7	22.2	1511.0	-3.7	22.2	1511.0	-3.7	22.2	1511.0	-3.7	22.2	1511.0
Bridgehampton, NY	-3.4	22.3	986.8	-3.4	22.3	986.8	-2.0	21.5	1169.9	-2.0	21.5	1169.9	-2.0	21.5	1169.9	-2.0	21.5	1169.9
Riverhead Res Far	-2.5	22.9	927.1	-2.5	22.9	927.1	-1.9	22.4	1369.6	-1.9	22.4	1369.6	-1.9	22.4	1369.6	-1.9	22.4	1369.6
Pachogue 2N	-2.8	23.0	1019.8	-2.8	23.0	1019.8	-2.4	22.8	1595.1	-2.4	22.8	1595.1	-2.4	22.8	1595.1	-2.4	22.8	1595.1
Long Branch Oakhurst, NJ	-2.9	23.5	875.8	-2.9	23.5	875.8	-2.7	20.7	M	-2.7	20.7	M	-2.7	20.7	M	-2.7	20.7	M
Toms River	-2.6	23.4	908.1	-2.6	23.4	908.1	-2.4	23.1	1437.9	-2.4	23.1	1437.9	-2.4	23.1	1437.9	-2.4	23.1	1437.9
Tuckertown	-2.1	23.9	791.2	-2.1	23.9	791.2	-1.5	23.6	1287.5	-1.5	23.6	1287.5	-1.5	23.6	1287.5	-1.5	23.6	1287.5
Atlantic City WSO AP	-2.9	24.9	761.2	-2.9	24.9	761.2	-2.2	24.1	1001.8	-2.2	24.1	1001.8	-2.2	24.1	1001.8	-2.2	24.1	1001.8
Belleplain St Forest	-2.0	23.9	869.4	-2.0	23.9	869.4	-1.6	22.7	1051.3	-1.6	22.7	1051.3	-1.6	22.7	1051.3	-1.6	22.7	1051.3
Cape May 2NW	-1.1	23.8	1126.2	-1.1	23.8	1126.2	-0.8	22.5	1111.8	-0.8	22.5	1111.8	-0.8	22.5	1111.8	-0.8	22.5	1111.8
Lewes, DE	-0.4	25.1	1077.5	-0.4	25.1	1077.5	0.2	20.6	1204.5	0.2	20.6	1204.5	0.2	20.6	1204.5	0.2	20.6	1204.5
Georgetown SSW	-2.0	24.8	1092.2	-2.0	24.8	1092.2	-1.6	23.4	1121.7	-1.6	23.4	1121.7	-1.6	23.4	1121.7	-1.6	23.4	1121.7
Kilmock 1N, VA	0.3	25.1	1226.3	0.3	25.1	1226.3	0.1	24.2	1103.1	0.1	24.2	1103.1	0.1	24.2	1103.1	0.1	24.2	1103.1
Painter 2W	1.1	25.1	1035.1	1.1	25.1	1035.1	1.3	24.3	1025.9	1.3	24.3	1025.9	1.3	24.3	1025.9	1.3	24.3	1025.9
Mathews 2ENE	1.1	24.9	1036.3	1.1	24.9	1036.3	0.4	24.1	1057.1	0.4	24.1	1057.1	0.4	24.1	1057.1	0.4	24.1	1057.1
Williamsburg 2	1.0	24.8	1307.8	1.0	24.8	1307.8	0.5	24.3	1183.9	0.5	24.3	1183.9	0.5	24.3	1183.9	0.5	24.3	1183.9
Norfolk WSO AP	1.6	25.7	1138.2	1.6	25.7	1138.2	1.9	24.8	1138.4	1.9	24.8	1138.4	1.9	24.8	1138.4	1.9	24.8	1138.4
Suffolk Lake Kilby	0.4	24.9	1221.5	0.4	24.9	1221.5	1.7	24.5	1160.8	1.7	24.5	1160.8	1.7	24.5	1160.8	1.7	24.5	1160.8

TABLE 3. (CONT.)

YEAR	1985				1985				1984				1984			
STATION	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)
Elizabeth City, NC	3.2	26.2	17.0	1156.0	3.3	25.6	16.4	1286.5	3.3	25.6	16.4	1286.5	3.3	25.6	16.4	1286.5
Edenton	3.1	26.1	16.8	1250.7	3.6	25.2	16.1	1267.0	3.6	25.2	16.1	1267.0	3.6	25.2	16.1	1267.0
Cape Hatteras WSO	5.0	26.4	17.8	1706.1	5.4	25.4	16.9	1148.1	5.4	25.4	16.9	1148.1	5.4	25.4	16.9	1148.1
Bayboro 3E	4.1	26.5	M	M	5.3	M	M	M	5.3	M	M	M	5.3	M	M	M
Cedar Island	4.7	27.3	17.9	1644.9	4.7	25.4	17.1	1367.3	4.7	25.4	17.1	1367.3	4.7	25.4	17.1	1367.3
Morehead City 2WNW	5.3	27.0	18.3	1768.1	5.9	25.9	17.5	1660.9	5.9	25.9	17.5	1660.9	5.9	25.9	17.5	1660.9
Hofmann Forest	5.6	27.1	18.2	1518.9	5.3	26.6	17.7	1595.1	5.3	26.6	17.7	1595.1	5.3	26.6	17.7	1595.1
Willard 4SW	3.7	26.1	17.4	1246.4	5.1	25.2	17.0	1279.1	5.1	25.2	17.0	1279.1	5.1	25.2	17.0	1279.1
Wilmington 7N	4.5	26.4	17.7	1246.4	4.9	25.6	17.1	1567.9	4.9	25.6	17.1	1567.9	4.9	25.6	17.1	1567.9
Wilmington WSO AP	6.2	27.4	18.8	1118.1	5.6	25.5	17.5	1476.0	5.6	25.5	17.5	1476.0	5.6	25.5	17.5	1476.0
Longwood	3.7	25.2	16.9	1294.9	4.9	25.2	16.6	1357.9	4.9	25.2	16.6	1357.9	4.9	25.2	16.6	1357.9
Southport 5N	5.2	25.6	17.4	1436.4	4.7	25.9	17.2	1646.4	4.7	25.9	17.2	1646.4	4.7	25.9	17.2	1646.4
Loris 1S, SC	4.1	25.8	17.2	1022.1	4.8	25.7	16.8	1111.8	4.8	25.7	16.8	1111.8	4.8	25.7	16.8	1111.8
Conway	5.3	26.9	18.6	1232.7	6.2	26.3	18.2	1172.7	6.2	26.3	18.2	1172.7	6.2	26.3	18.2	1172.7
Brookgreen Gardens	5.6	26.3	18.4	1434.8	6.9	25.9	17.8	1167.4	6.9	25.9	17.8	1167.4	6.9	25.9	17.8	1167.4
Georgetown 2E	6.4	26.7	18.8	1480.3	7.1	26.1	18.2	1503.9	7.1	26.1	18.2	1503.9	7.1	26.1	18.2	1503.9
McClellanville	5.8	26.2	18.4	1387.6	7.0	25.7	17.6	1307.6	7.0	25.7	17.6	1307.6	7.0	25.7	17.6	1307.6
Charleston WSO AP	5.9	27.2	19.2	1278.9	7.8	26.6	18.7	1174.2	7.8	26.6	18.7	1174.2	7.8	26.6	18.7	1174.2
Sullivan Island	8.0	27.6	19.7	1143.0	8.1	27.1	M	1269.7	8.1	27.1	M	1269.7	8.1	27.1	M	1269.7
Edisto Island 5SW	6.4	27.4	M	M	7.9	25.8	18.4	1339.6	7.9	25.8	18.4	1339.6	7.9	25.8	18.4	1339.6
Beaufort 7SW	7.9	27.2	19.7	1128.5	8.5	26.7	19.3	1172.0	8.5	26.7	19.3	1172.0	8.5	26.7	19.3	1172.0
Hilton Head	8.3	27.2	19.9	1109.5	8.7	M	M	1255.5	8.7	M	M	1255.5	8.7	M	M	1255.5
Savannah WSO AP, GA	7.4	28.2	19.8	981.5	8.7	27.0	19.4	1286.8	8.7	27.0	19.4	1286.8	8.7	27.0	19.4	1286.8
Fort Stewart	8.2	27.2	19.9	1128.3	9.7	26.8	M	M	9.7	26.8	M	M	9.7	26.8	M	M
Sapello Island	8.3	26.9	19.9	1132.3	7.9	26.3	18.7	1547.9	7.9	26.3	18.7	1547.9	7.9	26.3	18.7	1547.9
Brunswick	8.2	27.6	20.3	1257.8	8.7	26.5	19.8	1352.0	8.7	26.5	19.8	1352.0	8.7	26.5	19.8	1352.0
Folkston 9SW	9.6	27.3	20.9	1347.5	10.2	26.4	M	1324.9	10.2	26.4	M	1324.9	10.2	26.4	M	1324.9
Fernandina Beach, FL	9.0	26.9	M	1399.3	10.2	26.3	19.9	1247.4	10.2	26.3	19.9	1247.4	10.2	26.3	19.9	1247.4
Jacksonville Beach	11.6	27.6	M	M	11.4	25.9	20.4	1339.3	11.4	25.9	20.4	1339.3	11.4	25.9	20.4	1339.3
St. Augustine WFOY	10.9	27.0	21.2	1100.3	12.1	26.0	20.2	1477.5	12.1	26.0	20.2	1477.5	12.1	26.0	20.2	1477.5
Hastings Arc	9.7	26.5	20.6	1334.8	11.5	26.0	M	1177.8	11.5	26.0	M	1177.8	11.5	26.0	M	1177.8
Crescent City	10.8	28.4	22.3	1183.6	12.4	27.7	21.0	1186.4	12.4	27.7	21.0	1186.4	12.4	27.7	21.0	1186.4
Daytona Beach WSO AP	12.1	27.0	21.7	1552.7	12.8	26.1	20.6	M	12.8	26.1	20.6	M	12.8	26.1	20.6	M
Deland 1SSE	10.6	27.1	21.3	1545.3	M	26.6	21.4	1211.8	M	26.6	21.4	1211.8	M	26.6	21.4	1211.8
Sandford Exp Sta	11.9	27.3	21.9	1238.3	13.7	26.9	21.4	1285.0	13.7	26.9	21.4	1285.0	13.7	26.9	21.4	1285.0
Titusville	11.7	26.8	21.8	1438.7	13.2	26.8	21.4	978.7	13.2	26.8	21.4	978.7	13.2	26.8	21.4	978.7
McBourne	13.4	26.4	22.3	1308.6	15.7	26.6	22.1	1570.0	15.7	26.6	22.1	1570.0	15.7	26.6	22.1	1570.0
Vero Beach 4W	13.2	26.8	22.5	1377.4	16.2	27.1	22.3	1587.2	16.2	27.1	22.3	1587.2	16.2	27.1	22.3	1587.2
Stuart 1N	16.3	26.9	23.6	1549.9	M	26.9	M	1772.7	M	26.9	M	1772.7	M	26.9	M	1772.7
West Palm Beach WSO AF	15.9	27.2	23.8	1218.9	18.1	27.2	23.4	1750.3	18.1	27.2	23.4	1750.3	18.1	27.2	23.4	1750.3
Pompano Beach	17.2	27.6	24.6	1580.4	19.9	27.8	24.4	1508.8	19.9	27.8	24.4	1508.8	19.9	27.8	24.4	1508.8
Fort Lauderdale	17.2	27.2	24.2	1619.0	19.6	27.7	24.2	1433.8	19.6	27.7	24.2	1433.8	19.6	27.7	24.2	1433.8
Miami Beach	18.3	27.2	M	M	20.2	27.8	23.8	1178.6	20.2	27.8	23.8	1178.6	20.2	27.8	23.8	1178.6
Royal Palm Ranger Stat	16.6	27.6	24.3	1257.6	19.2	27.5	M	M	19.2	27.5	M	M	19.2	27.5	M	M
Tavernier	M	28.9	M	M	20.7	M	20.7	1014.7	20.7	M	20.7	1014.7	20.7	M	20.7	1014.7
Key West WSO AP	19.4	28.5	25.6	1072.9	20.3	28.3	25.2		20.3	28.3	25.2		20.3	28.3	25.2	

TABLE 3. (CONT.)

YEAR	1983			1983			1983			1982			1982			1982		
STATION	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Total Ppt. (mm)
Eastport, ME	-4.4	17.9	M	-10.3	17.7	M	-12.0	18.5	1050.0	-10.3	17.7	1050.0	-10.3	17.7	1050.0	-10.3	17.7	1050.0
Jonesboro	-5.6	18.7	6.7	-12.0	18.5	5.6	-12.0	18.5	1086.6	-12.0	18.5	1086.6	-12.0	18.5	1086.6	-12.0	18.5	1086.6
Ellsworth	M	M	M	-10.4	20.3	M	-10.4	20.3	M	-10.4	20.3	M	-10.4	20.3	M	-10.4	20.3	M
Belfast	-4.7	20.6	7.9	-9.7	19.9	7.2	-9.7	19.9	963.9	-9.7	19.9	963.9	-9.7	19.9	963.9	-9.7	19.9	963.9
Acadia Natl PK	-5.3	20.2	7.9	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
West Rockport 1W	-5.8	19.6	6.9	-10.9	19.3	5.9	-10.9	19.3	1022.6	-10.9	19.3	1022.6	-10.9	19.3	1022.6	-10.9	19.3	1022.6
New Castle	-4.2	20.9	8.2	-9.9	20.4	7.1	-9.9	20.4	1001.0	-9.9	20.4	1001.0	-9.9	20.4	1001.0	-9.9	20.4	1001.0
Brunswick	-4.1	20.7	8.4	M	20.8	M	M	20.8	M	M	20.8	M	M	20.8	M	M	20.8	M
Portland WSO	-3.8	20.9	8.2	-9.4	20.7	7.2	-9.4	20.7	1007.9	-9.4	20.7	1007.9	-9.4	20.7	1007.9	-9.4	20.7	1007.9
Sanford 2NNW	-4.1	22.2	8.9	-10.1	21.4	M	-10.1	21.4	1022.6	-10.1	21.4	1022.6	-10.1	21.4	1022.6	-10.1	21.4	1022.6
Durham, NH	-3.9	21.9	9.0	-9.8	20.7	7.7	-9.8	20.7	927.9	-9.8	20.7	927.9	-9.8	20.7	927.9	-9.8	20.7	927.9
Greenland	-2.9	21.3	9.0	-8.8	20.8	8.0	-8.8	20.8	1037.3	-8.8	20.8	1037.3	-8.8	20.8	1037.3	-8.8	20.8	1037.3
Haverhill, MA	-2.9	23.0	9.6	-7.9	21.6	8.6	-7.9	21.6	1162.6	-7.9	21.6	1162.6	-7.9	21.6	1162.6	-7.9	21.6	1162.6
Middletown	-2.1	23.3	10.4	-6.7	22.0	9.1	-6.7	22.0	1201.9	-6.7	22.0	1201.9	-6.7	22.0	1201.9	-6.7	22.0	1201.9
Peabody	-1.1	24.2	11.1	-4.6	M	M	-4.6	M	M	-4.6	M	M	-4.6	M	M	-4.6	M	M
Hingham	-1.1	23.0	10.4	-5.7	21.7	9.5	-5.7	21.7	1260.1	-5.7	21.7	1260.1	-5.7	21.7	1260.1	-5.7	21.7	1260.1
Brockton	-1.2	23.1	10.6	-5.8	22.3	9.6	-5.8	22.3	1250.7	-5.8	22.3	1250.7	-5.8	22.3	1250.7	-5.8	22.3	1250.7
Plymouth-Kingston	-1.4	21.9	9.8	-6.9	21.4	8.8	-6.9	21.4	1232.2	-6.9	21.4	1232.2	-6.9	21.4	1232.2	-6.9	21.4	1232.2
East Warcham	-1.3	22.2	10.1	-5.9	20.7	8.9	-5.9	20.7	1196.3	-5.9	20.7	1196.3	-5.9	20.7	1196.3	-5.9	20.7	1196.3
Chatham WMSO	1.0	21.1	10.4	-3.7	20.2	9.4	-3.7	20.2	1253.0	-3.7	20.2	1253.0	-3.7	20.2	1253.0	-3.7	20.2	1253.0
New Bedford	0.1	23.1	10.9	-4.7	22.4	9.9	-4.7	22.4	1251.7	-4.7	22.4	1251.7	-4.7	22.4	1251.7	-4.7	22.4	1251.7
Edgartown	-0.1	21.6	10.4	-4.4	20.6	9.4	-4.4	20.6	934.7	-4.4	20.6	934.7	-4.4	20.6	934.7	-4.4	20.6	934.7
Providence WSO AP, RI	-0.3	24.8	11.7	-5.8	23.1	10.4	-5.8	23.1	1251.2	-5.8	23.1	1251.2	-5.8	23.1	1251.2	-5.8	23.1	1251.2
Newport	-0.3	22.1	10.7	-4.6	21.2	9.7	-4.6	21.2	1134.6	-4.6	21.2	1134.6	-4.6	21.2	1134.6	-4.6	21.2	1134.6
Kingston	-1.0	22.3	10.4	-5.4	21.8	9.7	-5.4	21.8	1326.4	-5.4	21.8	1326.4	-5.4	21.8	1326.4	-5.4	21.8	1326.4
Middletown 4W, CT	-1.0	23.9	11.2	-5.8	23.3	10.6	-5.8	23.3	1308.4	-5.8	23.3	1308.4	-5.8	23.3	1308.4	-5.8	23.3	1308.4
Groton	-0.6	23.3	11.1	-5.2	23.1	10.3	-5.2	23.1	1337.1	-5.2	23.1	1337.1	-5.2	23.1	1337.1	-5.2	23.1	1337.1
New Haven	0.1	24.8	12.2	-4.8	24.0	M	-4.8	24.0	1168.4	-4.8	24.0	1168.4	-4.8	24.0	1168.4	-4.8	24.0	1168.4
Bridgeport WSO AP	-0.3	23.5	11.2	-5.1	22.7	10.4	-5.1	22.7	1082.3	-5.1	22.7	1082.3	-5.1	22.7	1082.3	-5.1	22.7	1082.3
Stamford 5N	-0.9	23.3	11.1	-5.1	22.4	10.4	-5.1	22.4	1115.6	-5.1	22.4	1115.6	-5.1	22.4	1115.6	-5.1	22.4	1115.6
Bridgehampton, NY	0.5	22.4	10.8	-4.6	21.8	9.9	-4.6	21.8	1185.9	-4.6	21.8	1185.9	-4.6	21.8	1185.9	-4.6	21.8	1185.9
Riverhead Res Far	1.2	23.9	12.1	-4.0	23.1	11.1	-4.0	23.1	1173.5	-4.0	23.1	1173.5	-4.0	23.1	1173.5	-4.0	23.1	1173.5
Patchogue 2N	0.7	23.9	11.7	-4.3	22.9	10.9	-4.3	22.9	1200.4	-4.3	22.9	1200.4	-4.3	22.9	1200.4	-4.3	22.9	1200.4
Long Branch Oakhurst, NJ	-0.2	23.1	10.9	-4.3	23.2	10.9	-4.3	23.2	1069.3	-4.3	23.2	1069.3	-4.3	23.2	1069.3	-4.3	23.2	1069.3
Toms River	0.7	24.4	12.0	-4.2	23.6	11.4	-4.2	23.6	999.2	-4.2	23.6	999.2	-4.2	23.6	999.2	-4.2	23.6	999.2
Tuckertown	1.3	25.1	12.4	-3.3	23.6	11.8	-3.3	23.6	991.9	-3.3	23.6	991.9	-3.3	23.6	991.9	-3.3	23.6	991.9
Atlantic City WSO AP	0.8	25.9	12.6	-4.1	24.9	12.2	-4.1	24.9	836.2	-4.1	24.9	836.2	-4.1	24.9	836.2	-4.1	24.9	836.2
Belleplain St Forest	1.6	M	M	-3.2	23.5	11.8	-3.2	23.5	985.0	-3.2	23.5	985.0	-3.2	23.5	985.0	-3.2	23.5	985.0
Cape May 2NW	2.4	25.3	M	-2.4	23.7	12.2	-2.4	23.7	946.7	-2.4	23.7	946.7	-2.4	23.7	946.7	-2.4	23.7	946.7
Lewes, DE	3.2	26.1	M	-1.1	25.3	14.0	-1.1	25.3	1161.3	-1.1	25.3	1161.3	-1.1	25.3	1161.3	-1.1	25.3	1161.3
Georgetown SSW	2.3	24.6	12.9	-2.4	24.1	12.5	-2.4	24.1	1013.7	-2.4	24.1	1013.7	-2.4	24.1	1013.7	-2.4	24.1	1013.7
Kilmarnock 1N, VA	2.9	25.2	13.6	-0.5	24.4	13.3	-0.5	24.4	1192.3	-0.5	24.4	1192.3	-0.5	24.4	1192.3	-0.5	24.4	1192.3
Painter 2W	3.8	26.1	14.5	0.8	25.4	14.2	0.8	25.4	1284.7	0.8	25.4	1284.7	0.8	25.4	1284.7	0.8	25.4	1284.7
Mathews 2ENE	3.6	25.7	14.2	0.7	25.3	14.2	0.7	25.3	1185.9	0.7	25.3	1185.9	0.7	25.3	1185.9	0.7	25.3	1185.9
Williamsburg 2	3.2	25.9	14.3	0.6	25.1	14.4	0.6	25.1	1389.1	0.6	25.1	1389.1	0.6	25.1	1389.1	0.6	25.1	1389.1
Norfolk WSO AP	4.6	26.8	15.3	1.9	25.9	15.2	1.9	25.9	1248.4	1.9	25.9	1248.4	1.9	25.9	1248.4	1.9	25.9	1248.4
Suffolk Lake Kilby	3.9	26.2	14.9	0.9	24.7	14.4	0.9	24.7	1272.5	0.9	24.7	1272.5	0.9	24.7	1272.5	0.9	24.7	1272.5

TABLE 3. (CONT.)

YEAR	1983				1983				1982				1982			
STATION	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)
Elizabeth City, NC	5.6	27.2	16.2	1218.4	3.7	26.6	16.1	1394.7	3.7	26.6	16.1	1394.7	3.7	26.6	16.1	1394.7
Edenton	5.6	26.7	16.0	1456.4	3.5	26.3	16.2	1314.7	3.5	26.3	16.2	1314.7	3.5	26.3	16.2	1314.7
Cape Hatteras WSO	7.2	26.4	16.6	1654.0	5.2	25.7	16.8	1443.7	5.2	25.7	16.8	1443.7	5.2	25.7	16.8	1443.7
Bayboro 3E	6.6	26.8	M	M	5.7	26.3	M	1480.8	5.7	26.3	M	1480.8	5.7	26.3	M	1480.8
Cedar Island	6.4	27.2	16.9	1733.0	4.8	26.1	17.3	1597.9	4.8	26.1	17.3	1597.9	4.8	26.1	17.3	1597.9
Morehead City 2WNW	7.3	26.8	17.2	1787.4	6.3	26.6	17.7	1546.4	6.3	26.6	17.7	1546.4	6.3	26.6	17.7	1546.4
Hofmann Forest	6.6	27.2	17.1	1463.5	5.3	26.6	17.5	1326.4	5.3	26.6	17.5	1326.4	5.3	26.6	17.5	1326.4
Willard 4SW	6.4	27.0	16.9	1396.2	4.7	26.2	17.3	1369.3	4.7	26.2	17.3	1369.3	4.7	26.2	17.3	1369.3
Wilmington 7N	6.2	26.9	16.8	1343.4	5.2	26.4	17.4	1476.8	5.2	26.4	17.4	1476.8	5.2	26.4	17.4	1476.8
Wilmington WSO AP	5.9	28.2	16.9	1501.6	5.3	26.2	17.1	1459.5	5.3	26.2	17.1	1459.5	5.3	26.2	17.1	1459.5
Longwood	6.2	26.1	16.1	1364.5	5.0	25.7	16.6	1283.5	5.0	25.7	16.6	1283.5	5.0	25.7	16.6	1283.5
Southport 5N	5.6	27.4	16.6	1567.2	3.5	27.1	16.6	1598.9	3.5	27.1	16.6	1598.9	3.5	27.1	16.6	1598.9
Loris 1S, SC	5.5	26.8	16.3	1277.1	4.8	26.6	17.1	1307.3	4.8	26.6	17.1	1307.3	4.8	26.6	17.1	1307.3
Conway	6.1	28.2	17.5	1388.9	5.6	27.3	18.1	1252.5	5.6	27.3	18.1	1252.5	5.6	27.3	18.1	1252.5
Brookgreen Gardens	6.8	27.3	17.3	1354.1	6.9	26.6	18.1	1550.7	6.9	26.6	18.1	1550.7	6.9	26.6	18.1	1550.7
Georgetown 2E	7.6	27.6	17.8	1405.9	8.6	26.8	18.9	1656.1	8.6	26.8	18.9	1656.1	8.6	26.8	18.9	1656.1
McClennanville	7.1	27.4	17.2	1433.1	7.7	26.4	18.3	1569.2	7.7	26.4	18.3	1569.2	7.7	26.4	18.3	1569.2
Charleston WSO AP	7.6	28.2	18.2	1373.9	7.3	27.3	18.7	1194.3	7.3	27.3	18.7	1194.3	7.3	27.3	18.7	1194.3
Sullivan Island	8.2	28.4	18.8	1257.3	8.9	27.9	M	1365.0	8.9	27.9	M	1365.0	8.9	27.9	M	1365.0
Edisto Island SSW	6.9	27.8	17.7	1400.6	8.0	26.9	18.9	1391.9	8.0	26.9	18.9	1391.9	8.0	26.9	18.9	1391.9
Beaufort 7SW	7.9	28.4	18.6	1365.0	9.4	27.1	19.6	1234.9	9.4	27.1	19.6	1234.9	9.4	27.1	19.6	1234.9
Hilton Head	8.2	28.4	18.7	1320.3	10.2	27.1	19.7	1477.8	10.2	27.1	19.7	1477.8	10.2	27.1	19.7	1477.8
Savannah WSO AP, GA	7.8	28.9	18.7	1384.6	9.3	27.4	19.8	1327.4	9.3	27.4	19.8	1327.4	9.3	27.4	19.8	1327.4
Fort Stewart	8.2	28.8	19.1	1264.9	10.5	27.3	20.2	1434.3	10.5	27.3	20.2	1434.3	10.5	27.3	20.2	1434.3
Sapello Island	8.9	27.9	18.7	1625.6	M	27.3	M	M	M	27.3	M	M	M	27.3	M	M
Brunswick	8.9	28.2	19.0	1531.4	10.2	28.1	20.4	1580.6	10.2	28.1	20.4	1580.6	10.2	28.1	20.4	1580.6
Folkston 9SW	9.1	27.7	19.3	1499.1	12.1	27.4	20.8	1396.2	12.1	27.4	20.8	1396.2	12.1	27.4	20.8	1396.2
Fernandina Beach, FL	10.1	27.7	19.3	1584.2	11.1	27.4	20.6	1309.6	11.1	27.4	20.6	1309.6	11.1	27.4	20.6	1309.6
Jacksonville Beach	11.6	28.7	20.6	1624.3	13.1	27.7	21.6	1502.9	13.1	27.7	21.6	1502.9	13.1	27.7	21.6	1502.9
St. Augustine WFOY	12.4	28.2	20.7	1565.4	13.7	27.2	21.7	1474.5	13.7	27.2	21.7	1474.5	13.7	27.2	21.7	1474.5
Hastings Arc	11.3	27.5	19.8	1789.9	12.7	26.9	21.1	1684.5	12.7	26.9	21.1	1684.5	12.7	26.9	21.1	1684.5
Crescent City	12.4	28.9	21.2	1579.4	14.3	28.2	M	1440.9	14.3	28.2	M	1440.9	14.3	28.2	M	1440.9
Daytona Beach WSO AP	12.2	27.6	20.2	1879.3	13.7	26.7	21.7	1274.6	13.7	26.7	21.7	1274.6	13.7	26.7	21.7	1274.6
Deland 1SSE	13.1	28.1	21.3	1811.0	13.1	28.2	M	M	13.1	28.2	M	M	13.1	28.2	M	M
Sandford Exp Sta	13.4	27.8	21.1	1596.4	13.9	27.9	22.5	1521.7	13.9	27.9	22.5	1521.7	13.9	27.9	22.5	1521.7
Titusville	13.9	27.8	21.2	1674.9	14.7	27.3	22.2	1790.7	14.7	27.3	22.2	1790.7	14.7	27.3	22.2	1790.7
Melbourne	15.6	27.6	21.9	1464.8	15.8	27.6	23.0	1147.3	15.8	27.6	23.0	1147.3	15.8	27.6	23.0	1147.3
Vero Beach 4W	15.8	28.1	22.3	1705.4	16.3	27.6	23.3	2076.2	16.3	27.6	23.3	2076.2	16.3	27.6	23.3	2076.2
Stuart 1N	17.4	28.5	23.8	2005.3	18.3	27.8	23.8	2165.1	18.3	27.8	23.8	2165.1	18.3	27.8	23.8	2165.1
West Palm Beach WSO AF	18.2	28.9	23.6	2100.8	18.7	28.4	24.7	2047.7	18.7	28.4	24.7	2047.7	18.7	28.4	24.7	2047.7
Pompano Beach	19.3	29.0	24.4	2159.8	19.9	28.8	25.6	1526.0	19.9	28.8	25.6	1526.0	19.9	28.8	25.6	1526.0
Fort Lauderdale	19.4	28.3	24.0	1909.1	19.6	28.4	24.8	2106.2	19.6	28.4	24.8	2106.2	19.6	28.4	24.8	2106.2
Miami Beach	20.0	28.8	24.4	1604.0	M	28.6	M	M	M	28.6	M	M	M	28.6	M	M
Royal Palm Ranger Stat	19.4	28.4	24.0	1868.4	19.4	28.3	24.7	1621.0	19.4	28.3	24.7	1621.0	19.4	28.3	24.7	1621.0
Tavernier	20.6	29.2	M	M	21.2	29.7	26.0	1685.5	21.2	29.7	26.0	1685.5	21.2	29.7	26.0	1685.5
Key West WSO AP	19.8	28.6	24.8	1330.7	21.8	29.7	26.1	930.9	21.8	29.7	26.1	930.9	21.8	29.7	26.1	930.9

TABLE 3. (CONT.)

YEAR	1981	1981	1981	1981	1981
STATION	Jan. Temp. (°C)	July Temp. (°C)	Mean Ann. Temp. (°C)	Total Ppt. (mm)	
Eastport, ME	M	18.2	M	M	
Jonesboro	-11.0	18.3	6.4	1434.6	
Ellsworth	-10.8	20.3	M	1113.3	
Belfast	-9.7	20.2	7.7	1242.1	
Acadia Natl PK	M	M	M	M	
West Rockport 1W	-11.7	19.4	6.9	1143.5	
New Castle	-9.9	20.3	7.8	1086.1	
Brunswick	-10.6	M	M	M	
Portland WSFO	-10.1	20.4	7.9	1160.8	
Sanford 2NNW	-9.5	21.4	8.4	1214.9	
Durham, NH	-9.1	20.7	8.1	1120.1	
Greenland	-8.3	21.1	8.7	M	
Haverhill, MA	-8.3	21.6	8.9	1080.0	
Middletown	-7.0	22.0	9.6	1112.0	
Peabody	-7.1	23.3	10.3	1069.8	
Hingham	-7.1	22.3	9.8	1159.3	
Brockton	-7.2	23.7	10.8	975.4	
Plymouth-Kingston	-8.4	21.6	8.9	1234.9	
East Wareham	-8.2	21.7	8.9	1133.3	
Chatham WMSO	-4.9	20.9	9.5	1173.7	
New Bedford	-5.8	23.4	10.3	1060.2	
Edgartown	-6.3	22.2	8.9	976.4	
Providence WSO AP, RI	-6.5	24.2	10.3	923.8	
Newport	-5.1	22.5	10.0	926.6	
Kingston	-6.8	22.5	9.6	1028.2	
Middletown 4W, CT	-5.3	24.1	11.0	1231.6	
Groton	-6.6	22.8	10.0	1010.9	
New Haven	-4.2	25.2	11.5	1074.4	
Bridgeport WSO AP	-5.4	23.3	10.3	829.8	
Stamford 5N	-5.9	24.1	10.7	1102.1	
Bridgehampton, NY	-5.1	22.7	10.1	1008.1	
Riverhead Res Far	-4.6	24.4	11.2	972.8	
Palchogue 2N	-5.1	24.1	10.8	1056.9	
Long Branch Oakhurst, NJ	-4.9	23.3	10.6	948.2	
Toms River	-4.1	24.3	M	990.6	
Tuckertown	-3.3	25.2	11.9	959.6	
Atlantic City WSO AP	-5.1	24.7	11.1	876.0	
Belleplain St Forest	-2.9	23.4	11.6	976.1	
Cape May 2NW	-1.9	24.8	12.2	892.3	
Lewes, DE	-0.7	25.0	M	1114.3	
Georgetown SSW	-2.3	24.5	12.3	931.4	
Killmarck 1N, VA	-1.0	24.8	13.5	1157.5	
Painter 2W	-0.2	25.3	13.8	985.0	
Mathews 2ENE	-0.3	25.4	13.9	905.5	
Williamsburg 2	-0.2	25.6	14.0	791.2	
Norfolk WSO AP	0.4	26.6	14.8	1046.0	
Suffolk Lake Kilby	-0.8	26.3	14.3	1035.6	

TABLE 3. (CONT.)

YEAR	1981	1981	1981	1981	1981
STATION	Jan. Temp. (°C)	July Temp. (°C)	Mass Ann. Temp. (°C)	Total Ppt. (mm)	
Elizabeth City, NC	1.8	M	M	1045.0	
Edenton	2.3	26.9	15.7	905.5	
Cape Hatteras WSO	2.3	25.9	15.6	1309.1	
Bayboro 3E	3.1	27.0	M	1404.1	
Cedar Island	2.8	27.1	16.4	1379.7	
Morehead City 2WNW	3.6	27.2	16.7	1261.6	
Hofmann Forest	3.5	27.4	16.6	1205.7	
Willard 4SW	3.6	26.4	16.3	1101.9	
Wilmington 7N	3.6	27.2	16.4	1281.2	
Wilmington WSO AP	3.1	27.1	16.1	1127.5	
Longwood	2.9	26.1	15.4	1370.6	
Southport 5N	M	26.8	M	1195.8	
Loris 1S, SC	3.0	26.8	15.8	1396.7	
Conway	4.3	28.0	17.3	1312.9	
Brookgreen Gardens	4.6	27.4	17.1	1137.9	
Georgetown 2E	5.7	27.9	17.7	1382.5	
McClallanville	4.8	27.2	17.1	1278.4	
Charleston WSO AP	5.3	27.9	17.9	1255.8	
Sullivan's Island	6.2	27.6	M	1124.0	
Edisto Island 5SW	5.6	28.2	17.7	1235.5	
Beaufort 7SW	6.9	28.4	18.7	1027.9	
Hilton Head	6.9	28.4	18.7	1087.9	
Savannah WSO AP, GA	6.4	29.1	18.7	1017.5	
Fort Stewart	7.7	29.5	19.2	951.2	
Sapello Island	7.3	27.7	M	1124.7	
Brunswick	6.2	29.6	19.1	979.9	
Folkston 9SW	8.1	28.8	M	852.2	
Fernandina Beach, FL	7.8	28.3	19.4	1022.4	
Jacksonville Beach	9.0	28.3	20.3	900.4	
St. Augustine WFOY	9.7	27.4	20.3	1105.7	
Hastings Arc	8.3	27.7	19.7	1039.4	
Crescent City	9.9	29.1	21.4	994.9	
Daytona Beach WSO AP	9.3	28.2	20.7	1007.9	
Deland ISSE	7.7	28.1	M	1375.7	
Sandford Exp Sta	10.2	28.4	21.1	1058.4	
Titusville	9.7	27.8	M	1037.1	
Melbourne	11.2	28.1	21.7	812.0	
Vero Beach 4W	11.6	28.2	22.0	1136.1	
Stuart 1N	13.7	28.3	22.8	965.7	
West Palm Beach WSO AP	14.8	28.9	23.5	1263.4	
Pompano Beach	15.6	M	M	1281.4	
Fort Lauderdale	14.8	28.4	23.5	1470.7	
Miami Beach	16.1	28.6	M	1345.4	
Royal Palm Ranger Stat	14.9	28.2	23.7	1542.0	
Tavernier	16.6	29.5	24.6	1160.8	
Key West WSO AP	16.3	29.9	25.1	687.8	