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HURRICANE EXPERIENCE LEVELS OF COASTAL
COUNTY POPULATIONS FROM TEXAS TO MAINE

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CONTENTS

| | Page |
|---|-------|
| Abstract . | 1 |
| Introduction . | 1 |
| Data Sources . | 2 |
| Purpose | 2 |
| Procedure | 2 |
| Discussion . | 11 |
| Summary | 14 |
| Acknowledgements . | 14 |
| Bibliography | 15 |
| Appendix A: The Saffir/Simpson Hurricane Scale | 16 |
| Appendix B: Individual Coastal County Hurricane Climatology/Population Graphs, Texas to Maine | 18 |
| Appendix C: A Tabular Hurricane Climatology by Counties, Texas to Maine, 1900-1990 . | . 131 |

LIST OF TABLES

| | | |
|-----------|---|---|
| Table 1. | Saffir/Simpson Hurricane Scale Ranges . | 2 |
| Table 2. | Coastal County Population by State, 1990, and at the Time of the Last Major Hurricane . | 3 |
| Table 3. | Examples of Hurricane Classifications on the Saffir/Simpson Hurricane Scale | 5 |
| Table 4a. | Number of hurricanes (Direct Hits) affecting U.S. and Individual States 1900-1990 according to Saffir/Simpson Hurricane Scale . | 7 |
| Table 4b. | Chronological List of All Hurricanes Which Struck the U.S. 1900-1990, Including Category by States | 8 |

HURRICANE EXPERIENCE LEVELS OF COASTAL COUNTY
POPULATIONS FROM TEXAS TO MAINE

by

Jerry D. Jarrell, Paul J. Hebert, and Max Mayfield

(This publication updates the previous version by
Hebert, Taylor, and Case, published in 1984)

ABSTRACT

Population graphs for the period 1900-1990 have been prepared for coastal counties from Texas to Maine which could be affected significantly by hurricane winds or tides. The Saffir/Simpson Hurricane Scale¹ (range 1-5) has been used to develop a hurricane climatology for each county for the period 1900-1990. The combined statistics graphically illustrate that about 85 percent of all Atlantic and Gulf coastal residents of the United States have never experienced the effects of a direct hit by a major² hurricane.

INTRODUCTION

A series of hurricane workshops was conducted during the Spring of 1974 by Dr. Neil Frank, Director, National Hurricane Center (NHC), and his staff. The basic purpose of these workshops was to exchange ideas and information with National Weather Service officials and to discuss operational hurricane problems. Some of the materials prepared for the workshops were the basis for this paper.

Population statistics show a continued trend in recent years of rapid population increases along Atlantic and Gulf coastal areas. This trend, along with the relatively low frequency of hurricanes and low hurricane experience level of nearly 38 million coastal residents, has become an item of major concern at the National Hurricane Center.

¹See Table 1 and Appendix A.

²A major hurricane is a category 3, 4 or 5 on the Saffir/Simpson Hurricane Scale, and is comparable to a Great Hurricane in several other referenced publications.

Table 1. Saffir/Simpson Hurricane Scale Ranges.

| Scale Number (Category) | Central Pressure (Millibars) | OR Winds (Mph) | OR Surge (Feet) | Damage |
|----------------------------|---------------------------------|----------------------|-----------------------|--------------|
| 1 | ≥ 980 | 74-95 | 4-5 | Minimal |
| 2 | 965-979 | 96-110 | 6-8 | Moderate |
| 3 | 945-964 | 111-130 | 9-12 | Extensive |
| 4 | 920-944 | 131-155 | 13-18 | Extreme |
| 5 | < 920 | > 155 | > 18 | Catastrophic |

DATA SOURCES

Population statistics were provided by the U. S. Department of Commerce, Bureau of the Census, publications. Hurricane information was obtained by checking conventional data sources plus available materials in NHC files and some material from local station files.

PURPOSE

The primary purpose of this study is to illustrate the increase in Gulf and Atlantic coastal populations in recent years and to show the low hurricane experience level of most of these coastal residents. While many people have experienced fringe conditions of a major hurricane or the direct effects of a weaker hurricane, a relatively small percentage of the coastal population has experienced a direct hit by a major hurricane.

It is hoped that the information in this paper will help coastal residents and disaster preparedness groups to substitute education for hurricane experience. A simple comparison of numbers (Saffir/Simpson Hurricane Scale Numbers 1-5) relating hurricanes of recent experience to major or historical hurricanes of the past has been found to be most effective by NHC personnel in addressing various groups concerning hurricane disaster potential.

PROCEDURE

Population statistics for each coastal county from Texas to Maine were obtained from the U.S. Bureau of the Census publications for the period 1900-1990. This information was plotted on individual graphs for each county, 175 in all. A hurricane climatology, described below, was entered on each graph showing the year and severity of each hurricane affecting the county from 1900 through 1990. The complete collection of county graphs is included as Appendix B.

A tabulation was made for each Gulf and Atlantic coastal state listing coastal county populations in 1990 and at the time of the last major hurricane (Scale numbers 3-5) since 1900. This is illustrated in Table 2. The population differences were listed for each state and hurricane experience levels were calculated for Gulf and Atlantic coastal residents.

Table 2. Coastal County population by state showing percentage of residents who have never experienced a direct hit by a major hurricane (≥ 3 on Saffir/Simpson Hurricane Scale).

| STATE | 1990 COASTAL POPULATION | EXPERIENCED POPULATION | INEXPERIENCED POPULATION | % OF 1990 TOTAL |
|----------------|-------------------------|------------------------|--------------------------|-----------------|
| TEXAS | 4,320,460 | 942,959 | 3,377,501 | 78 |
| LOUISIANA | 1,550,498 | 748,820 | 801,678 | 52 |
| MISSISSIPPI | 312,368 | 266,658 | 45,710 | 15 |
| ALABAMA | 476,923 | 383,532 | 93,391 | 20 |
| FLORIDA (W) | 3,991,668 | 256,383 | 3,735,285 | 94 |
| FLORIDA (E) | 6,137,526 | 287,654 | 5,849,872 | 95 |
| GEORGIA | 386,415 | 0 | 386,415 | 100 |
| SOUTH CAROLINA | 606,196 | 378,111 | 228,085 | 38 |
| NORTH CAROLINA | 597,372 | 211,862 | 385,510 | 65 |
| VIRGINIA | 1,515,325 | 8,887 | 1,506,438 | 99 |
| MARYLAND | 2,518,634 | 0 | 2,518,634 | 100 |
| DELAWARE | 666,168 | 0 | 666,168 | 100 |
| NEW JERSEY | 3,954,415 | 0 | 3,954,415 | 100 |
| NEW YORK | 10,806,642 | 2,270,100 | 8,536,542 | 79 |
| CONNECTICUT | 2,030,017 | 401,206 | 1,628,811 | 80 |
| RHODE ISLAND | 1,003,464 | 336,356 | 667,108 | 66 |
| MASSACHUSETTS | 3,095,930 | 113,679 | 2,982,251 | 96 |
| NEW HAMPSHIRE | 245,845 | 0 | 245,845 | 100 |
| MAINE | 623,198 | 0 | 623,198 | 100 |
| ALL | 44,839,064 | 6,606,206 | 38,232,858 | 85 |

Note: Experienced population is an estimate of the portion of the coastal population during the last major hurricane that survived to 1990.

A hurricane climatology, based upon the Saffir/Simpson Hurricane Scale (with atmospheric pressure ranges adapted), was prepared for the 91-year period 1900-1990 based on the following guidelines:

1. Scale numbers (1-5), as shown in Table 1, were assigned to hurricanes primarily based on estimated central pressure values at the time of landfall. A certain amount of subjectivity is inherent in this type of classification, particularly with hurricanes during earlier years and with those moving inland in sparsely-settled areas. In view of this, some hurricanes near the borderline between two scale numbers might be classified one way or the other based on various considerations, such as storm surge.

Flooding from excessive rainfall during the life of a hurricane was not a criterion in selecting scale numbers. Hurricanes DIANE 1955 and AGNES 1972 for example, relatively weak hurricanes, were disastrous flood-makers. They each caused widespread flood damage in several states; however, based on central pressures at the time of landfall, both hurricanes were in category 1.

In some cases, hurricanes traversing a long path across many states may change scale numbers before dissipating. A good example of this is Hurricane DONNA of 1960, which changed from category 4 all the way down to category 1 during its journey between Florida and Maine (see Table 3).

Examples of hurricanes in each category of the Saffir/Simpson Hurricane Scale are listed in Table 3. All scale number 4 and 5 hurricanes for the 91-year period 1900-1990 are listed. Prior to 1950, names were not used in connection with hurricanes. For three years, 1950-52, the phonetic alphabet was used for naming hurricanes, e.g., ABLE, BAKER, CHARLIE, etc... Female names were used for naming hurricanes from 1953 to 1978. Since 1979 alternating male and female names have been used.

2. After each hurricane had been assigned a scale number, it was determined which coastal counties received direct hits and which received indirect hits by hurricanes since 1900. In addition to hurricanes which have occurred since 1982 (last year of the previous version), a few hurricanes have been added, or categories of others changed, based on additional information.

Table 3. Examples of Hurricane Classifications on the Saffir/Simpson Hurricane Scale.

| CATEGORY | GULF COAST | | | FLORIDA | | | EAST COAST | | |
|----------|------------|------|-------|-----------|------|----------|------------|-------|----------|
| | HURRICANE | YEAR | AREA | HURRICANE | YEAR | AREA | HURRICANE | YEAR | AREA |
| 1 | CHANTAL | 1989 | TX | FLOYD | 1987 | Keys | CHARLEY | 1986 | NC |
| | JERRY | 1989 | TX | AGNES | 1972 | NW | BOB | 1985 | SC |
| | JUAN | 1985 | LA | INEZ | 1966 | Keys | GLORIA | 1985 | NH,ME |
| | ETHYL | 1960 | MS | FLOSSY | 1956 | NW | BELLE | 1976 | NY |
| | ABLE | 1950 | AL | FLORENCE | 1953 | NW | AGNES | 1972 | NY,CT |
| | | | | | 1947 | SE | GINGER | 1971 | NC |
| | | | | | | | GERDA | 1969 | ME |
| | | | | | | | DONNA | 1960 | ME |
| 2 | EDITH | 1971 | LA | KATE | 1985 | NW | BOB | 1991 | RI,MA |
| | FLOSSY | 1956 | LA | DAVID | 1979 | SE | GLORIA | 1985 | CT |
| | | 1949 | TX | GLADYS | 1968 | NW | DIANA | 1984 | NC |
| | | 1945 | TX | ALMA | 1966 | NW | DONNA | 1960 | CT,RI |
| | | | | ISBELL | 1964 | SW | CAROL | 1954 | NC |
| | | | | CLEO | 1964 | SE | HAZEL | 1954 | MD |
| | | | | DORA | 1964 | NE | | 1947 | GA,SC |
| 3 | ELENA | 1985 | MS,AL | ELENA | 1985 | NW | GLORIA | 1985 | NC,NY |
| | ALICIA | 1983 | TX | ELOISE | 1975 | NW | DONNA | 1960 | NC,NY |
| | ALLEN | 1980 | TX | BETSY | 1965 | Keys | GRACIE | 1959 | SC |
| | CARMEN | 1974 | LA | EASY | 1950 | NW | CONNIE | 1955 | NC |
| | CELIA | 1970 | TX | KING | 1950 | SE | IONE | 1955 | NC |
| | BEULAH | 1967 | TX | | 1949 | SE | CAROL | 1954 | NY,CT,RI |
| | BETSY | 1965 | LA | | 1948 | SW+Keys | EDNA | 1954 | MA |
| | | | | | | | 1938 | NY-MA | |
| 4 | CARLA | 1961 | TX | DONNA | 1960 | Keys+SW | HUGO | 1989 | SC |
| | AUDREY | 1957 | LA | | 1947 | SE | HAZEL | 1954 | SC,NC |
| | | 1932 | TX | | 1928 | SE+Lk.O. | | | |
| | | 1919 | TX | | 1926 | SE | | | |
| | | 1915 | TX | | 1919 | Keys | | | |
| | | 1915 | LA | | | | | | |
| | | 1909 | LA | | | | | | |
| | | 1900 | TX | | | | | | |
| 5 | CAMILLE | 1969 | MS | | 1935 | Keys | NONE | | |

As with the assignment of scale numbers, a certain amount of subjectivity was inescapable at times in determining which counties received direct or indirect hits during the various hurricane situations. However, certain arbitrary guidelines for these classifications were used as listed below.

Direct Hit When the innermost core regions, or "eye," moved over a county, it was counted as a direct hit. "R" is defined as the radius of maximum winds in a hurricane (the distance in miles from the storm's center to the circle of maximum winds around the center). A county is regarded as receiving a direct hit when all or parts of a county fall within about 2R to the right and R to the left of a storm's landfall. This assumes an observer at sea looking toward shore. On the average, this direct hit zone extended about 50 miles along the coastline ($R \approx 15$ miles). Of course, some hurricanes were smaller than this and some, particularly in higher latitudes, were much larger. Cases were judged individually, and many borderline situations had to be resolved.

Indirect Hit - These were based primarily on a hurricane's strength and size and on the configuration of the individual county coastline. Here again, much subjectivity was necessary often complicated by storm paths and geography. Generally, those areas on either side of the direct hit zone which received hurricane force winds or tides of at least 4 to 5 feet above normal were considered to be indirect hits.

The complete hurricane climatology, 1900-1990, for all coastal counties from Texas to Maine is included in tabular form as Appendix C. It is a series of twenty pages of counties listed in approximate geographical order from the lower Texas coast to the upper coast of Maine.

The procedures described above make up the main thrust of this paper.

Several other graphs and tables were prepared, using the same basic information as follows:

- 1 Appendix A describes the Saffir/Simpson Hurricane Scale.
- 2) Tables 4a and 4b were prepared in the process of developing the Saffir/Simpson Hurricane Scale climatology. Comments concerning all tables and appendixes are included in the following section.

Table 4a. Number of hurricanes (direct hits) affecting the U.S and individual states 1900-1990 according to Saffir/Simpson Hurricane Scale (updated from Hebert, Jarrell and Mayfield, 1992).

| AREA | CATEGORY NUMBER | | | | | ALL | MAJOR HURRICANES (≥3) |
|-----------------------|-----------------|----|----|----|---|-----|-----------------------|
| | 1 | 2 | 3 | 4 | 5 | | |
| U.S. (Texas to Maine) | 57 | 34 | 44 | 14 | 2 | 151 | 60 |
| Texas | 12 | 9 | 9 | 6 | 0 | 36 | 15 |
| (North) | 7 | 3 | 3 | 4 | 0 | 17 | 7 |
| (Central) | 2 | 2 | 1 | 1 | 0 | 6 | 2 |
| (South) | 3 | 4 | 5 | 1 | 0 | 13 | 6 |
| Louisiana | 8 | 5 | 7 | 3 | 1 | 24 | 11 |
| Mississippi | 1 | 1 | 5 | 0 | 1 | 8 | 6 |
| Alabama | 4 | 1 | 5 | 0 | 0 | 10 | 5 |
| Florida | 17 | 15 | 16 | 5 | 1 | 54 | 22 |
| (Northwest) | 9 | 7 | 6 | 0 | 0 | 22 | 6 |
| (Northeast) | 1 | 7 | 0 | 0 | 0 | 8 | 0 |
| (Southwest) | 6 | 3 | 5 | 2 | 1 | 17 | 8 |
| (Southeast) | 4 | 10 | 7 | 3 | 0 | 24 | 10 |
| Georgia | 1 | 4 | 0 | 0 | 0 | 5 | 0 |
| South Carolina | 6 | 4 | 2 | 2 | 0 | 14 | 4 |
| North Carolina | 10 | 3 | 8 | 1* | 0 | 22 | 9 |
| Virginia | 2 | 1 | 1* | 0 | 0 | 4 | 1* |
| Maryland | 0 | 1* | 0 | 0 | 0 | 1* | 0 |
| Delaware | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| New Jersey | 1* | 0 | 0 | 0 | 0 | 1* | 0 |
| New York | 3 | 0 | 5* | 0 | 0 | 8 | 5* |
| Connecticut | 2 | 3* | 3* | 0 | 0 | 8 | 3* |
| Rhode Island | 0 | 1* | 3* | 0 | 0 | 4* | 3* |
| Massachusetts | 2 | 1* | 2* | 0 | 0 | 5 | 2* |
| New Hampshire | 1* | 1* | 0 | 0 | 0 | 2* | 0 |
| Maine | 5 | 0 | 0 | 0 | 0 | 5 | 0 |

Indicates all hurricanes in this category were moving greater than 30 mph.

Note: State totals will not equal U.S. totals and Texas and Florida sectional totals will not necessarily equal state totals.

Table 4b.

Chronological List of All Hurricanes Which Affected the U.S.
1900-1990 Including Category by States.

| Year | Month | States Affected & Category by States | Highest Category U.S. | Minimum Sea Level Pressure (Mb.) | Name |
|------|-------|---|-----------------------------|---|------|
| 1900 | Sep | TX, 4N | 4 | 931 | |
| 1901 | Jul | NC, 1 | 1 | - | |
| 1901 | Aug | LA, MS 2 | 2 | 972 | |
| 1903 | Sep | FL, 2SE, 1NW | 2 | 976 | |
| 1903 | Sep | NJ, NY, CT, 1 | 1 | 990 | |
| 1904 | Sep | SC, 1 | 1 | - | |
| 1906 | Jun | FL, 1SE | 1 | - | |
| 1906 | Sep | SC, NC, 3 | 3 | 947 | |
| 1906 | Sep | MS, AL, 3 | 3 | 958 | |
| 1906 | Oct | FL, 2SE | 2 | 967 | |
| 1908 | Jul | NC, 1 | 1 | - | |
| 1909 | Jul | TX, 3N | 3 | 958 | |
| 1909 | Aug | TX, 2S | 2 | - | |
| 1909 | Sep | LA, 4 | 4 | 931 | |
| 1909 | Oct | FL, 3SE (Keys) | 3 | 957 | |
| 1910 | Sep | TX, 2S | 2 | 965 | |
| 1910 | Oct | FL, 3SW | 3 | 955 | |
| 1911 | Aug | FL, 1NW; AL, 1 | 1 | - | |
| 1911 | Aug | GA, SC, 2 | 2 | - | |
| 1912 | Sep | AL, 1 | 1 | - | |
| 1912 | Oct | TX, 1S | 1 | - | |
| 1913 | Jun | TX, 1S | 1 | - | |
| 1913 | Sep | NC, 1 | 1 | - | |
| 1915 | Aug | TX, 4N | 4 | 945 | |
| 1915 | Sep | FL, 1NW | 1 | 988 | |
| 1915 | Sep | LA, 4 | 4 | 931 | |
| 1916 | Jul | MS, AL, 3 | 3 | 948 | |
| 1916 | Jul | MA, 1 | 1 | - | |
| 1916 | Jul | SC, 1 | 1 | 980 | |
| 1916 | Aug | TX, 3S | 3 | 948 | |
| 1916 | Oct | AL, 2; FL, 2NW | 2 | 972 | |
| 1916 | Nov | FL, 1SW (Keys) | 1 | - | |
| 1917 | Sep | FL, 3NW | 3 | 958 | |
| 1918 | Aug | LA, 3 | 3 | 955 | |
| 1919 | Sep | FL, 4SW (Keys); TX, 4S | 4 | 927 | |
| 1920 | Sep | LA, 2 | 2 | 975 | |
| 1920 | Sep | NC, 1 | 1 | - | |
| 1921 | Jun | TX, 2C | 2 | 979 | |
| 1921 | Oct | FL, 3SW, 2NE | 3 | 952 | |
| 1923 | Oct | LA, 1 | 1 | 985 | |
| 1924 | Sep | FL, 1NW | 1 | 985 | |
| 1924 | Oct | FL, 1SW | 1 | 980 | |
| 1925 | Nov | FL, 1SW | 1 | - | |
| 1926 | Jul | FL, 2NE | 2 | 967 | |
| 1926 | Aug | LA, 3 | 3 | 955 | |
| 1926 | Sep | FL, 4SE, 3SW, 3NW, AL, 3 | 4 | 935 | |
| 1928 | Aug | FL, 2SE | 2 | - | |
| 1928 | Sep | FL, 4SE, 2NE, GA, SC, 1 | 4 | 929 | |
| 1929 | Jun | TX, 1C | 1 | 982 | |
| 1929 | Sep | FL, 3SE, 2NW | 3 | 948 | |
| 1932 | Aug | TX, 4N | 4 | 941 | |
| 1932 | Sep | AL, 1 | 1 | 979 | |

* Indicates all hurricanes in this category were moving greater than 30mph.

Table 4b. (Cont'd.)

| <u>Year</u> | <u>Month</u> | <u>States Affected & Category by States</u> | <u>Highest Category U.S.</u> | <u>Minimum Sea Level Pressure (Mb.)</u> | <u>Name</u> |
|-------------|--------------|---|------------------------------|---|-------------|
| 1933 | Jul/Aug | FL, 1SE, TX, 2S | 2 | 975 | |
| 1933 | Aug | NC, VA, 2 | 2 | 971 | |
| 1933 | Sep | TX, 3S | 3 | 949 | |
| 1933 | Sep | FL, 3SE | 3 | 948 | |
| 1933 | Sep | NC, 3 | 3 | 957 | |
| 1934 | Jun | LA, 3 | 3 | 962 | |
| 1934 | Jul | TX, 2S | 2 | 975 | |
| 1935 | Sep | FL, 5SW (Keys), 2NW | 5 | 892 | |
| 1935 | Nov | FL, 2SE | 2 | 973 | |
| 1936 | Jun | TX, 1S | 1 | 987 | |
| 1936 | Jul | FL, 3NW | 3 | 964 | |
| 1936 | Sep | NC, 2 | 2 | - | |
| 1938 | Aug | LA, 1 | 1 | 985 | |
| 1938 | Sep | NY, CT, RI, MA 3* | 3* | 946 | |
| 1939 | Aug | FL, 1SE, 1NW | 1 | 985 | |
| 1940 | Aug | TX, 2N, LA, 2 | 2 | 972 | |
| 1940 | Aug | GA, SC, 2 | 2 | 970 | |
| 1941 | Sep | TX, 3N | 3 | 958 | |
| 1941 | Oct | FL, 2SE, 2SW, 2NW | 2 | 975 | |
| 1942 | Aug | TX, 1N | 1 | 992 | |
| 1942 | Aug | TX, 3C | 3 | 950 | |
| 1943 | Jul | TX, 2N | 2 | 969 | |
| 1944 | Aug | NC, 1 | 1 | 990 | |
| 1944 | Sep | NC, VA, NY, CT, RI, 3* | | | |
| | | MA, 2* | 3* | 947 | |
| 1944 | Oct | FL, 3SW, 2NE | 3 | 962 | |
| 1945 | Jun | FL, 1NW | 1 | 985 | |
| 1945 | Aug | TX, 2C | 2 | 967 | |
| 1945 | Sep | FL, 3SE | 3 | 951 | |
| 1946 | Oct | FL, 1SW | 1 | 980 | |
| 1947 | Aug | TX, 1N | 1 | 992 | |
| 1947 | Sep | FL, 4SE, 2SW; MS, LA, 3 | 4 | 940 | |
| 1947 | Oct | FL, 1SE; GA, SC, 2 | 2 | 974 | |
| 1948 | Sep | LA, 1 | 1 | 987 | |
| 1948 | Sep | FL, 3SW, 2SE | 3 | 963 | |
| 1948 | Oct | FL, 2SE | 2 | 975 | |
| 1949 | Aug | NC, 1 | 1 | 980 | |
| 1949 | Aug | FL, 3SE | 3 | 954 | |
| 1949 | Oct | TX, 2N | 2 | 972 | |
| 1950 | Aug | AL, 1 | 1 | 980 | Baker |
| 1950 | Sep | FL, 3NW | 3 | 958 | Easy |
| 1950 | Oct | FL, 3SE | 3 | 955 | King |
| 1952 | Aug | SC, 1 | 1 | 985 | Able |
| 1953 | Aug | NC, 1 | 1 | 987 | Barbara |
| 1953 | Sep | ME, 1* | 1* | - | Carol |
| 1953 | Sep | FL, 1NW | 1 | 985 | Florence |
| 1954 | Aug | NC, 2; NY, CT, RI, 3* | 3* | 960 | Carol |
| 1954 | Sep | MA, 3*; ME, 1* | 3* | 954 | Edna |
| 1954 | Oct | SC, NC, 4*; MD, 2* | 4* | 938 | Hazel |
| 1955 | Aug | NC, 3; VA, 1 | 3 | 962 | Connie |
| 1955 | Aug | NC, 1 | 1 | 987 | Diane |
| 1955 | Sep | NC, 3 | 3 | 960 | Ione |
| 1956 | Sep | LA, 2; FL, 1NW | 2 | 975 | Flossy |
| 1957 | Jun | TX, 4N; LA, 4 | 4 | 945 | Audrey |

Table 4b. (Cont'd.)

| <u>Year</u> | <u>Month</u> | <u>States Affected & Category by States</u> | <u>Highest Category U.S.</u> | <u>Minimum Sea Level Pressure (Mb.)</u> | <u>Name</u> |
|-------------|--------------|---|--------------------------------------|---|-------------|
| 1959 | Jul | SC, 1 | 1 | 993 | Cindy |
| 1959 | Jul | TX, 1N | 1 | 984 | Debra |
| 1959 | Sep | SC, 3 | 3 | 950 | Gracie |
| 1960 | Sep | FL, 4SW (Keys), 2NE; NC, NY, 3*; CT, RI, 2*; MA, NH, ME, 1* | 4 | 930 | Donna |
| 1960 | Sep | MS, 1 | 1 | 981 | Ethel |
| 1961 | Sep | TX, 4C | 4 | 931 | Carla |
| 1963 | Sep | TX, 1N | 1 | 996 | Cindy |
| 1964 | Aug | FL, 2SE | 2 | 968 | Cleo |
| 1964 | Sep | FL 2NE | 2 | 966 | Dora |
| 1964 | Oct | LA, 3 | 3 | 950 | Hilda |
| 1964 | Oct | FL, 2SW, 2SE | 2 | 974 | Isbell |
| 1965 | Sep | FL, 3SE; LA, 3 | 3 | 948 | Betsy |
| 1966 | Jun | FL, 2NW | 2 | 982 | Alma |
| 1966 | Oct | FL, 1SW, (Keys) | 1 | 983 | Inez |
| 1967 | Sep | TX, 3S | 3 | 950 | Beulah |
| 1968 | Oct | FL, 2NW, 1NE | 2 | 977 | Gladys |
| 1969 | Aug | LA, MS, 5 | 5 | 909 | Camille |
| 1969 | Sep | ME, 1 | 1 | 980 | Gerda |
| 1970 | Aug | TX, 3S | 3 | 945 | Celia |
| 1971 | Sep | LA, 2 | 2 | 978 | Edith |
| 1971 | Sep | TX, 1C | 1 | 979 | Fern |
| 1971 | Sep | NC, 1 | 1 | 993 | Ginger |
| 1972 | Jun | FL, 1NW; NY, CT, 1 | 1 | 980 | Agnes |
| 1974 | Sep | LA, 3 | 3 | 952 | Carmen |
| 1975 | Sep | FL, 3NW | 3 | 955 | Eloise |
| 1976 | Aug | NY, 1 | 1 | 980 | Belle |
| 1977 | Sep | LA, 1 | 1 | 995 | Babe |
| 1979 | Jul | LA, 1 | 1 | 986 | Bob |
| 1979 | Sep | FL, 2SE, 2NE; GA, 2; SC, 2 | 2 | 970 | David |
| 1979 | Sep | AL, MS, 3 | 3 | 946 | Frederic |
| 1980 | Aug | TX, 3S | 3 | 945 | Allen |
| 1983 | Aug | TX, 3N | 3 | 962 | Alicia |
| 1984 | Sep | NC, 2 | 2 | 972 | Diana |
| 1985 | Jul | SC, 1 | 1 | 1002 | Bob |
| 1985 | Aug | LA, 1 | 1 | 987 | Danny |
| 1985 | Sep | AL, MS, 3; FL, 3NW | 3 | 959 | Elena |
| 1985 | Sep | NC, 3; NY, 3*; CT, NH, 2*; ME, 1* | 3 | 942 | Gloria |
| 1985 | Oct | LA, 1 | 1 | 971 | Juan |
| 1985 | Nov | FL, 2NW | 2 | 967 | Kate |
| 1986 | Jun | TX, 1N | 1 | 990 | Bonnie |
| 1986 | Aug | NC, 1 | 1 | 990 | Charley |
| 1987 | Oct | FL, 1SW | 1 | 993 | Floyd |
| 1988 | Sep | LA, 1 | 1 | 984 | Florence |
| 1989 | Jul | TX, 1N | 1 | 986 | Chantal |
| 1989 | Sep | SC, 4 | 4 | 934 | Hugo |
| 1989 | Oct | TX, 1N | 1 | 983 | Jerry |

DISCUSSION

The purpose of this statistical discussion is to show graphically the low hurricane experience level of most U.S. coastal residents. The 175 county graphs in Appendix B are the primary data presented. Most of the information in the other Appendixes and Tables is contained within these graphs. However, while it may appear redundant in some instances, the data have been presented in these forms to allow for an easier statistical interpretation on a county, state, and national basis. Some of this interpretation has been included briefly in the sections under Procedures and the forewords of the Appendixes. The rest is used to illustrate the more significant facts which can be inferred.

Reference Table 1. An important point here is that the central pressure ranges will generally agree quite well with the wind ranges, but that the surge is strongly dependent on the slope of the continental shelf (shoaling factor). This can change the height of the surge by a factor of two for any given scale number.

Reference Table 2. This table was designed as a general illustration of population increases in Gulf and Atlantic coastal states since the last direct hit by a major hurricane. It should be emphasized that the population figures refer to coastal sections only for each state. Experienced population is an estimate of the portion of the county population during the last major hurricane that survived to 1990.

Where there have been no direct hits by major hurricanes since 1900, inexperienced population is shown as 100%.

It is estimated that 38 million people along the Gulf and Atlantic coasts have never experienced a direct hit by a major hurricane. This is 85% of the Gulf and Atlantic coastal residents. Six states have not had a single direct hit by a major hurricane in this century. In Florida, the most hurricane prone state, 95% of the coastal population has never experienced a direct hit by a major hurricane.

The main point to be made here (and throughout this paper) is that most of the people overestimate their hurricane experience. Commonly, people experience either a relatively weak hurricane (categories 1 and 2), or an indirect hit (fringe conditions) by a major hurricane. Less than 15% have felt the most intense central core. This creates a sense of false security in the 85% of the coastal residents during the next major hurricane situation.

Considering the growth rate of most coastal counties, as shown in the graphs in Appendix B, experience levels are likely conservative. In the eight years from 1982 to 1990, all four major hurricanes to strike the U.S. (Alicia 1983, Elena 1985, Gloria 1985, Hugo 1989) hit in areas containing relatively few people.

Reference Table 3. As indicated in Table 1, the terms "Scale Number" and "Category" are used interchangeably. In addition to DONNA 1960, Table 3 also shows several other hurricanes which affected different areas with different scale numbers (e.g., HAZEL 1954, CAROL 1954, GLORIA 1985), or the same scale number (e.g., BETSY 1965, 1919).

Only two category 5 hurricanes have affected the U.S. coastline this century. Those were the "Labor Day Storm" of 1935 in the Florida Keys, and hurricane Camille of 1969 on the Mississippi/Louisiana coast. Of the 14 hurricanes listed in category 4, only two (HAZEL 1954 AND HUGO 1989) affected the Atlantic coast north of Florida. (In 1919, the same category 4 hurricane affected the Florida Keys and Texas).

Reference Table 4a. Many hurricanes affect more than one state (reference Table 3). In addition, Florida and Texas have been subdivided into sections because of their extensive coastlines. In Florida, the north-south dividing line is roughly from Cape Canaveral to Tarpon Springs (Brevard County is in the northeast, and Pinellas County is in the southwest).

In Texas, south is south of Corpus Christi (Nueces County is in the south). Central Texas is north of Corpus Christi to Matagorda Bay (Matagorda County is central). North is Matagorda Bay to the Louisiana border. As a result, entries in Table 4a may be made more than once for the same hurricane. Florida and Texas sectional totals may not equal state totals, and state totals cannot be summed to get regional or national totals. However, the first line in the table is an actual count of all hurricanes which have affected the United States, where only the highest category of any state affected has been tabulated. This total indicates that 151 hurricanes have affected the U.S. coast during the period 1900-1990. Of this total, 60 or about 40% were major hurricanes.

While a direct hit by a major hurricane in any one locality is a rare event, the sobering statistics of the top line in Table 4a illustrate that on the average so far this century: 1) two major hurricanes (capable of causing damage in the billions of dollars and killing hundreds) cross the U.S. coast somewhere every three years; 2) a category 4 hurricane crosses the U. S. coastline somewhere nearly once every six years.

This table gives a quick reference to the hurricane climatology of individual states. The table reveals that 37% of all hurricanes hit Florida. A few other noteworthy statistics are that Florida and Texas combined have been hit by nearly 75% of category 4 or higher hurricanes. About half of the hurricanes along the middle Gulf coast, southern Florida, and New York and southern New England are major.

Reference Table 4b. This table is a chronological list of all 151 hurricanes including categories by states. Also included in the table is a list of estimated central pressures at the time of

landfall for the highest U. S. category. Pressure values are not available for several earlier years nor for a few hurricanes in recent years which moved inland in sparsely settled areas. By comparing the central pressure of a given hurricane to the range of pressures for each scale number, it is possible to see how close that hurricane came to falling into a higher or lower category. In addition, the effect of extreme forward speed (indicated by an asterisk beside a number) must be considered for most hurricanes north of Cape Hatteras.

Reference Appendix A. This scale has been referred to as the Simpson Disaster Potential Scale in some earlier publications.

Reference Appendix B. A note of caution is needed to avoid incorrect interpretation of these graphs. Because of the different population ranges from graph to graph, the total increase in a county with a large population but relatively slow growth rate may be larger than a more sparsely populated county with a rapid growth rate. One other point--if the core (direct hit) of a major hurricane affected only a sparsely populated section of a heavily populated county (e.g., Dade County, Florida--BETSY 1965), it was considered to be an indirect hit in these graphs.

These graphs give a complete hurricane climatology on a county-by-county basis. It would be quite difficult to determine how individual hurricanes affected larger areas if one had to compare county graphs. Appendix C has been prepared to readily supply this information.

Reference Appendix C. This appendix has been designed so that pages can be combined into a single, continuous display for the entire Gulf and Atlantic coasts, or for individual states, or regional sections.

In this form, the data from Appendix B shows many facts on a county, state, or regional basis. For example, the size of a hurricane can be seen by the number of counties affected (although tracks relative to geographical configurations can be misleading in a few instances). Also, one can readily count how many direct or indirect hits of any category have occurred, or how long it has been between any hurricanes, or those of a particular category.

SUMMARY

Populations continue to increase along most sections of the Gulf and Atlantic coasts of the United States. This trend, along with the relatively low frequency of hurricanes in recent years and low hurricane experience levels of some 38 million coastal residents, is an item of major concern at the National Hurricane Center. This report can help to some degree in substituting education for hurricane experience.

When a hurricane crosses the coast, many persons feel its effects. Only a small percentage of the coastal residents experience a direct hit by its intense inner core, the major death and damage producer of the hurricane. Most residents experience indirect hits, or fringe effects, during hurricane situations (or direct hits, by relatively weak hurricanes--categories 1 and 2). These residents can be lulled into a false sense of security by feeling that they have experienced the worst part. In view of this, these same residents might underestimate the disaster potential of subsequent hurricane situations.

While the increase in coastal populations is alarming, it is felt that the figures presented in this report are conservative. Since 1990, unofficial estimates indicate that most Gulf and Atlantic coastal populations have continued to increase. In addition, these population statistics are for permanent residents and do not take into account summer tourism which may increase some localized coastal populations tenfold during weekends or holidays. Another major concern, not discussed in this report, is that many thousands of the coastal county residents live in mobile homes which are extremely vulnerable to hurricanes of any category.

Acknowledgments. Dr. Neil Frank, then Director, NHC, conceived the idea of combining population graphs and hurricane climatology and suggested the original preparation of this report. Ms. Patty Caracilio typed the revised manuscript, and many thanks to Marisa Pasekoff for painstakingly error-checking the graphs.

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APPENDIX A

THE SAFFIR/SIMPSON³ HURRICANE SCALE

The Saffir/Simpson Hurricane Scale is used by the National Weather Service to give public safety officials a continuing assessment of the potential for wind and storm-surge damage from a hurricane in progress. Scale numbers are made available to public-safety officials when a hurricane is within 72 hours of landfall.

Scale numbers range from 1 to 5. Scale No. 1 begins with hurricanes in which the maximum sustained winds are at least 74 miles per hour, or will produce a storm surge 4 to 5 feet above normal water level, while Scale No. 5 applies to those in which the maximum sustained winds are more than 155 miles per hour, or have the potential of producing a storm surge more than 18 feet above normal.

Dr. Neil Frank, a former NHC Director, adapted atmospheric pressure ranges to the Saffir/Simpson Scale. These pressure ranges, along with a numerical break-down of wind and storm surge ranges, are listed in Table 1.

The Weather Service emphasizes that the scale numbers are not forecasts, but are based on observed conditions at a given time in a hurricane's lifespan. They represent an estimate of what the storm would do to a coastal area if it were to strike without change in size or strength. Scale assessments are revised regularly as new observations are made, and public-safety organizations are kept informed of new estimates of the hurricane's disaster potential.

The Saffir/Simpson Hurricane Scale indicates probable property damage and evacuation recommendations as listed below:

Scale No. 1 - Winds of 74 to 95 miles per hour. Damage primarily to shrubbery, trees, foliage and unanchored mobile homes. No real damage to other structures. Some damage to poorly constructed signs. And/or: storm surge 4 to 5 feet above normal. Low-lying coastal roads inundated, minor pier damage, some small craft in exposed anchorage torn from moorings.

³ Developed by Herbert Saffir, Dade County, Florida, Consulting Engineer, and Dr. Robert H. Simpson, a former National Hurricane Center Director.

Scale No. 2 - Winds of 96 to 110 miles per hour. Considerable damage to shrubbery and tree foliage, some trees blown down. Major damage to exposed mobile homes. Extensive damage to poorly constructed signs. Some damage to roofing materials of buildings; some window and door damage. No major damage to buildings. And/or: storm surge 6 to 8 feet above normal. Coastal roads and low-lying escape routes inland cut by rising water 2 to 4 hours before arrival of hurricane center. Considerable damage to piers. Marinas flooded. Small craft in unprotected anchorages torn from moorings. Evacuation of some shoreline residences and low-lying island areas required.

Scale No. 3 - Winds of 111 to 130 miles per hour. Foliage torn from trees, large trees blown down. Practically all poorly constructed signs blown down. Some damage to roofing materials of buildings; some window and door damage. Some structural damage to small buildings. Mobile homes destroyed. And/or: storm surge 9 to 12 feet above normal. Serious flooding at coast and many smaller structures near coast destroyed; larger structures near coast damaged by battering waves and floating debris. Low-lying escape routes inland cut by rising water 3 to 5 hours before hurricane center arrives. Flat terrain 5 feet or less above sea level flooded inland 8 miles or more. Evacuation of low-lying residences within several blocks of shoreline possibly required.

Scale No. 4 - Winds of 131 to 155 miles per hour. Shrubs and trees blown down, all signs down. Extensive damage to roofing materials, windows and doors. Complete failure of roof on many small residences. Complete destruction of mobile homes. And/or: storm surge 13 to 18 feet above normal. Flat terrain 10 feet or less above sea level flooded inland as far as 6 miles. Major damage to lower floors of structures near shore due to flooding and battering by waves and floating debris. Low-lying escape routes inland cut by rising water 3 to 5 hours before hurricane center arrives. Major erosion of beaches. Massive evacuation of all residences within 500 yards of shore possibly required, and of single-story residences on low ground within 2 miles of shore.

Scale No. 5 - Winds greater than 155 miles per hour. Shrubs and trees blown down, considerable damage to roofs of buildings; all signs down. Very severe and extensive damage to windows and doors. Complete failure of roofs on many residences and industrial buildings. Extensive shattering of glass in windows and doors. Some complete building failures. Small buildings overturned or blown away. Complete destruction of mobile homes. And/or: storm surge greater than 18 feet above normal. Major damage to lower floors of all structures less than 15 feet above sea level within 500 yards of shore. Low-lying escape routes inland cut by rising water 3 to 5 hours before hurricane arrives. Massive evacuation of residential areas on low ground within 5 to 10 miles of shore possibly required.

APPENDIX B

INDIVIDUAL COASTAL COUNTY HURRICANE CLIMATOLOGY/POPULATION GRAPHS, TEXAS TO MAINE

Data is arranged in packets representing each state (Florida is presented as two packets and Mississippi and Alabama are combined into a single packet as are New Hampshire and Maine). Major cities or well known locations are indicated for some counties. Packets are presented geographically south to north and west to east along the coast from Texas to Maine. The state packets contain:

1. A listing of county (or other population) groupings for the state.
2. A spreadsheet showing the population figures from 1900-1990 by county, the year of the last major hurricane to directly affect the area, an estimate of the population which experienced the major hurricane and was still living in the county in 1990. This same information is converted to a percent of the present population which has not experienced a major hurricane.
3. A state population growth chart which summarizes population growth over the twentieth century of both the state total as well as growth in coastal counties. The total population of the state with major hurricane experience is also shown.
4. The individual coastal county population growth charts, showing hurricane strikes and an estimate of that population having major hurricane experience.

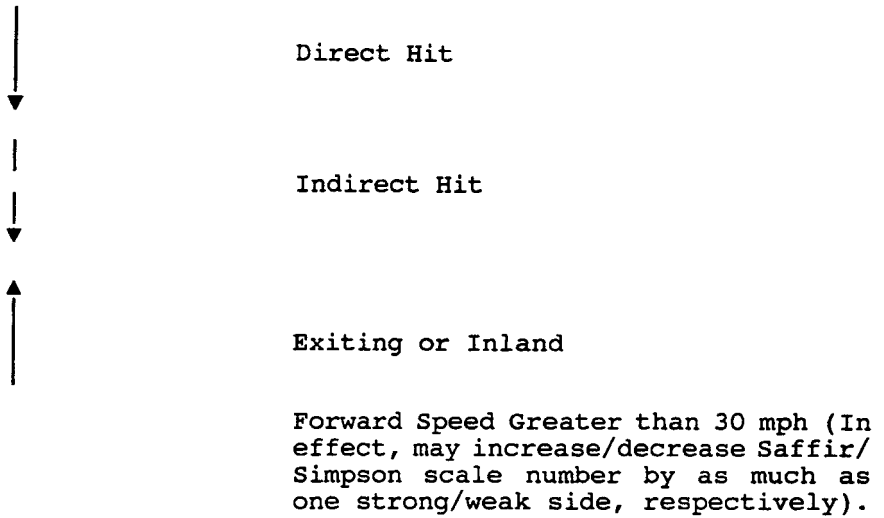
The set of population graphs in this appendix illustrates population trends along the Gulf and Atlantic coasts of the United States during the period 1900-1990. Hurricane climatology in the body of the individual coastal county population growth charts is indicated by arrows and Saffir/ Simpson Scale numbers for the period 1900-1990. Each hurricane is represented by either a solid or dashed, thick or thin arrow along with appropriate scale number and is entered at the year of occurrence. Solid arrows indicate direct hits, and dashed arrows denote indirect hits. Thick arrows are for major hurricanes (Category 3, 4 or 5), thin arrows are for Categories 1 and 2. This gives a convenient, quick reference to the number and frequency of direct hits in each county by hurricanes since 1900.

Experienced Population: An attempt was made to determine what portion of the 1990 population of coastal counties has experienced a major hurricane (Saffir-Simpson Category 3 or greater). The previous study simply assumed that the total population of the county at the time of the last major hurricane event was still living in the same area in 1990. If the population had decreased, then the entire remaining population was assumed to be experienced.

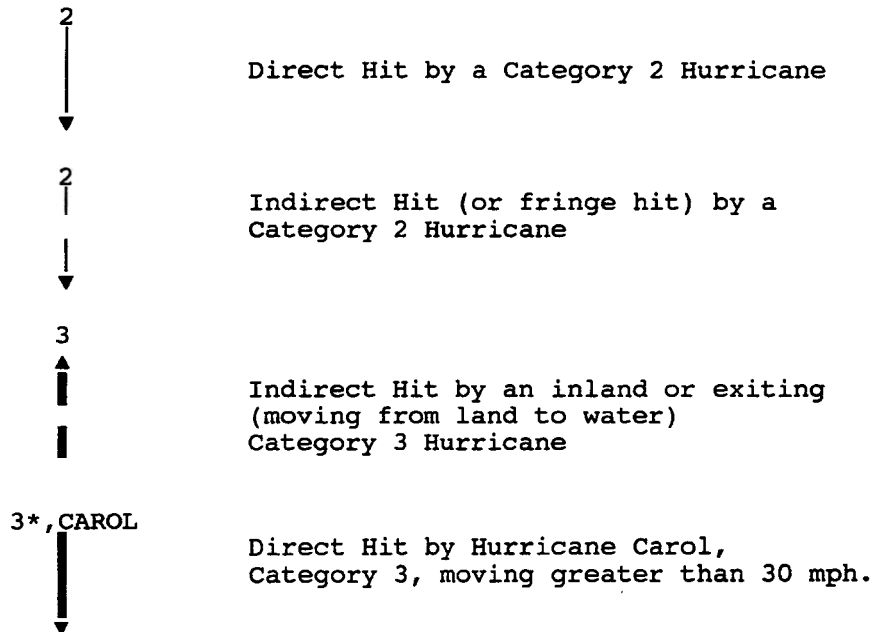
If the population increased, then all new residents were assumed to be non-experienced. When the last major hurricane event was several decades prior to 1990, the foregoing assumptions are clearly invalid because mortality would have decreased the experienced population sharply. Mortality is a very important consideration where the last major strike has been several years and the population has shown either a modest increase or a decrease. In many counties mortality was a minor consideration because the population has increased so dramatically since the major hurricane events of the 1940s to 1960s that the experienced portion was almost negligible even without accounting for mortality. In the present study an attempt is made to account for mortality.

The "1958 Commissioners Standard Ordinary Mortality Tables" were applied to the population by first assuming a stable, non-growing population. With this assumption, the numbers in each age bracket can be estimated from the total population of the county, which in turn was interpolated between censuses. The 1990 numbers remaining in each bracket who had experienced a major hurricane can be computed. Experience was not attributed to those individuals age 3 years or less when the major hurricane occurred. Somewhat surprisingly, there was no case, even with shrinking populations, that the computed "experienced population" exceeded the actual 1990 population.

The key to symbols used in connection with hurricane climatology on each graph, along with examples, is shown below. Comparable symbols, without arrows, were used with scale numbers in tabular form in Appendix C:



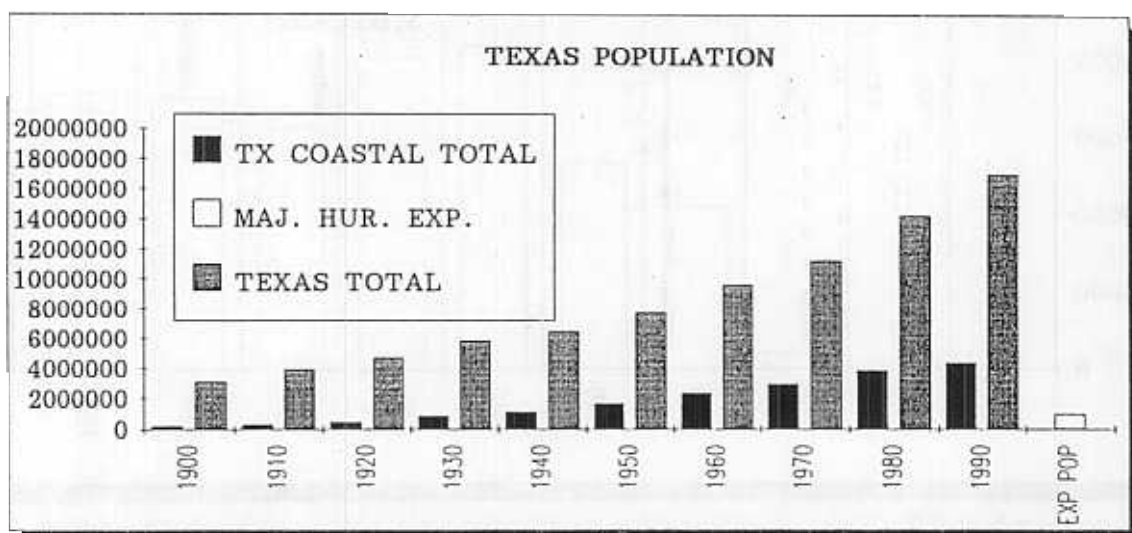
Examples (Symbols used in Hurricane Climatology/Population Graphs)

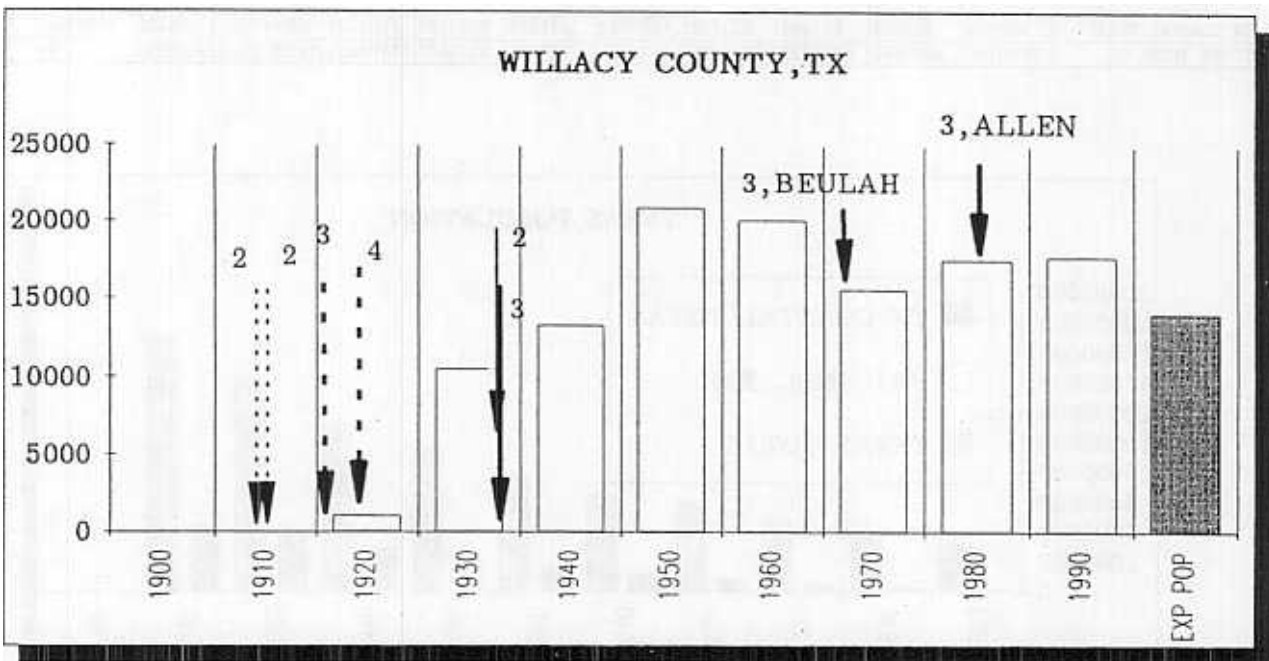
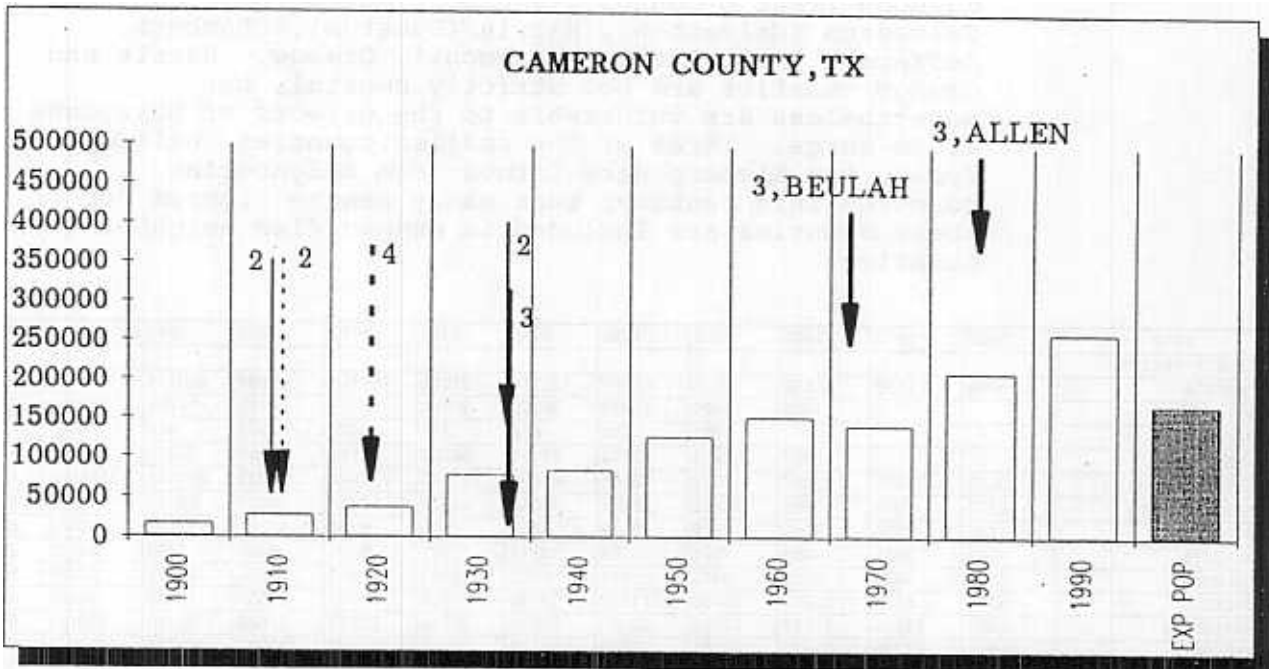


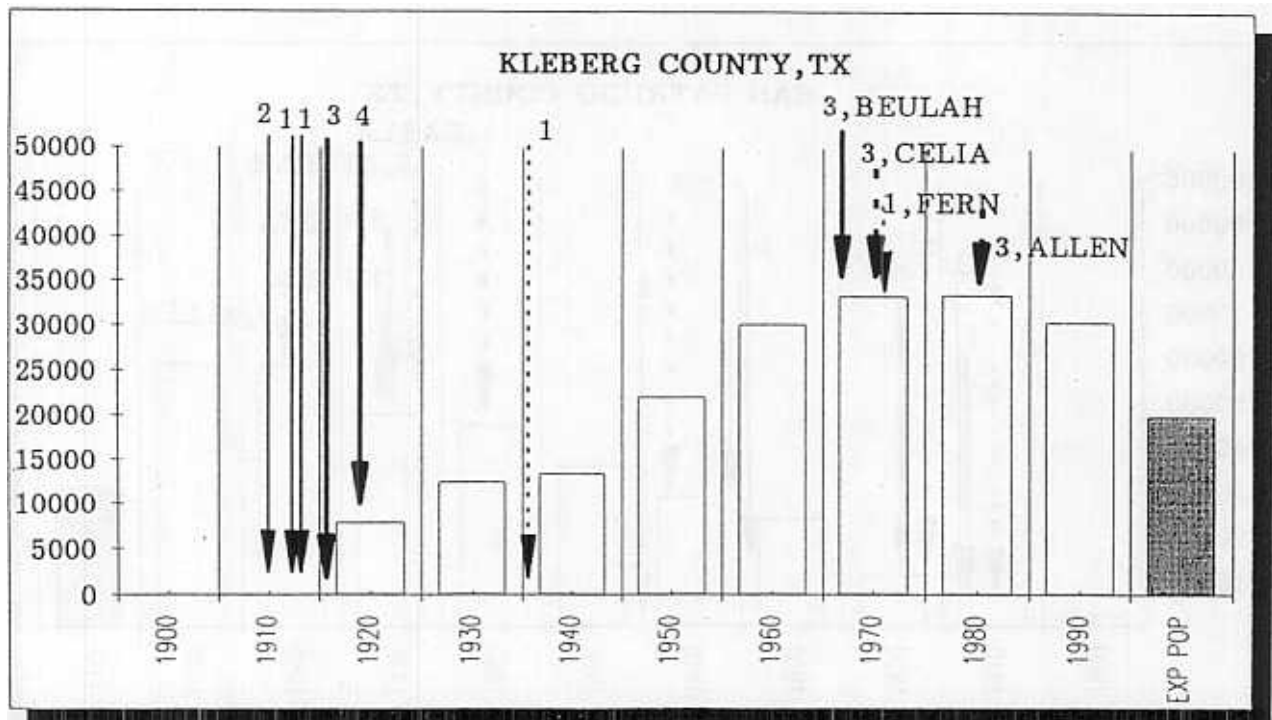
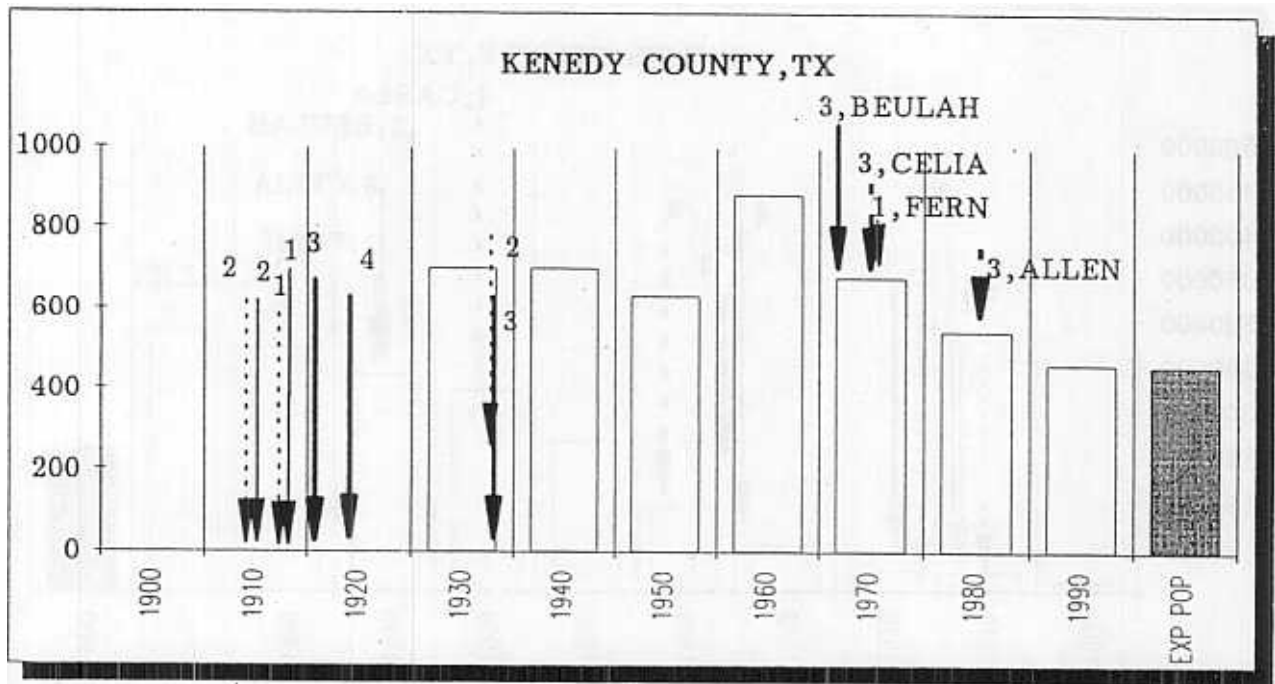
NOTE: Names of hurricanes (after 1949) are entered above arrows, and arrow length is of no significance. Major hurricanes (Categories 3,4 and 5) are indicated by a heavy arrow shaft.

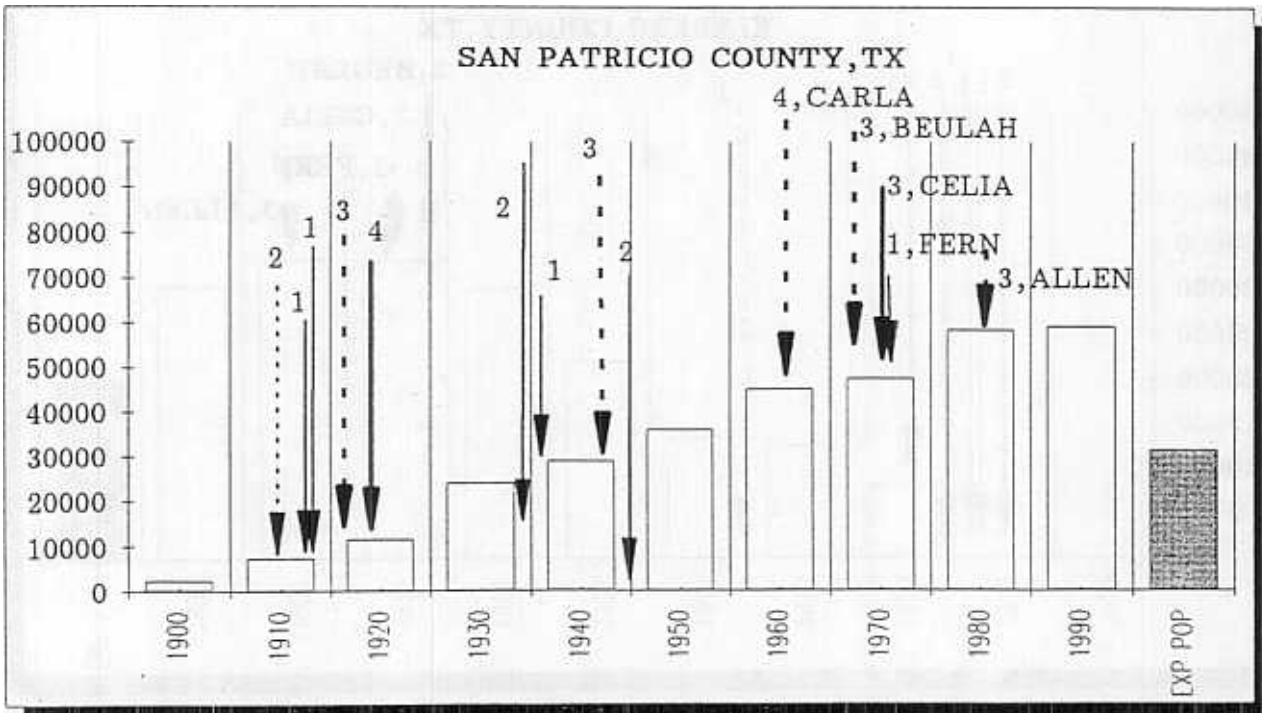
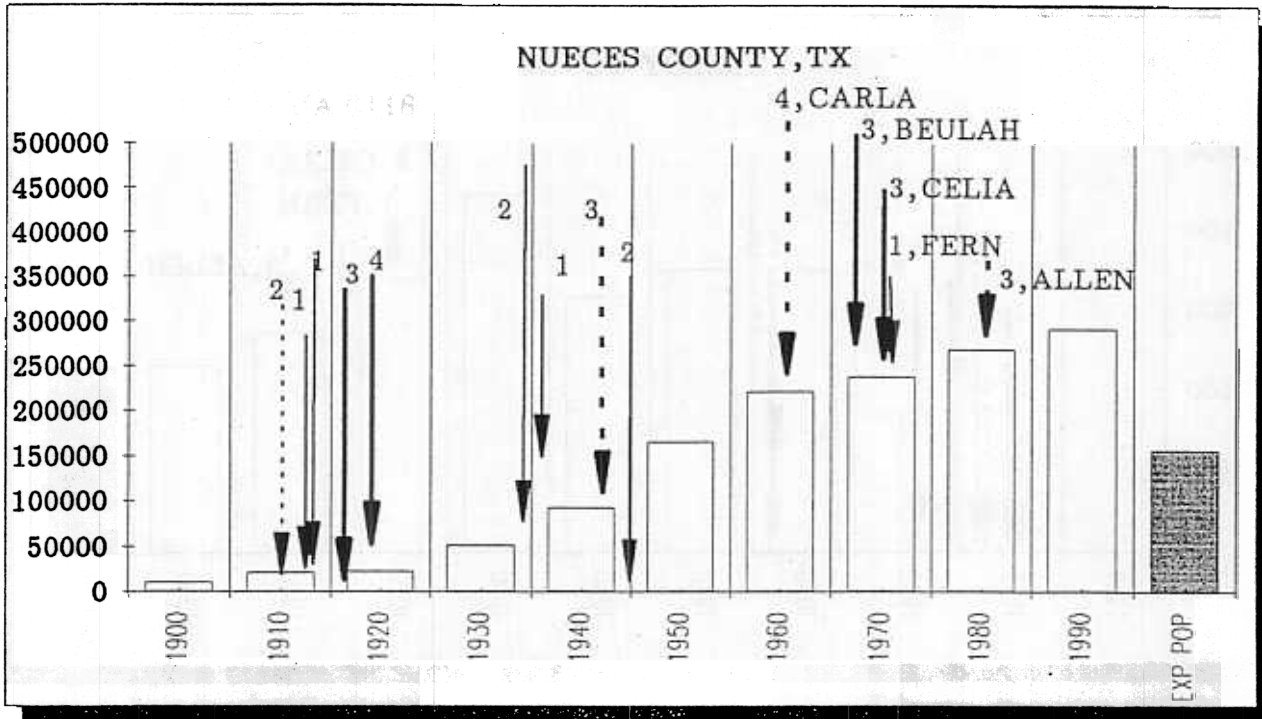
Cameron (Brownsville), Willacy, Kenedy, Kleberg, Nueces (Corpus Christi), San Patricio, Aransas, Refugio, Calhoun (Port O'Connor), Jackson, Matagorda, Brazoria, Galveston (Galveston), Harris (Houston), Chambers, Jefferson (Port Arthur, Beaumont), Orange. Harris and Orange counties are not strictly coastal, but nevertheless are vulnerable to the effects of hurricane storm surge. Three of the smaller counties, Willacy, Kenedy and Kleberg were formed from neighboring counties this century; thus early census figures for these counties are included in unspecified neighbor counties.

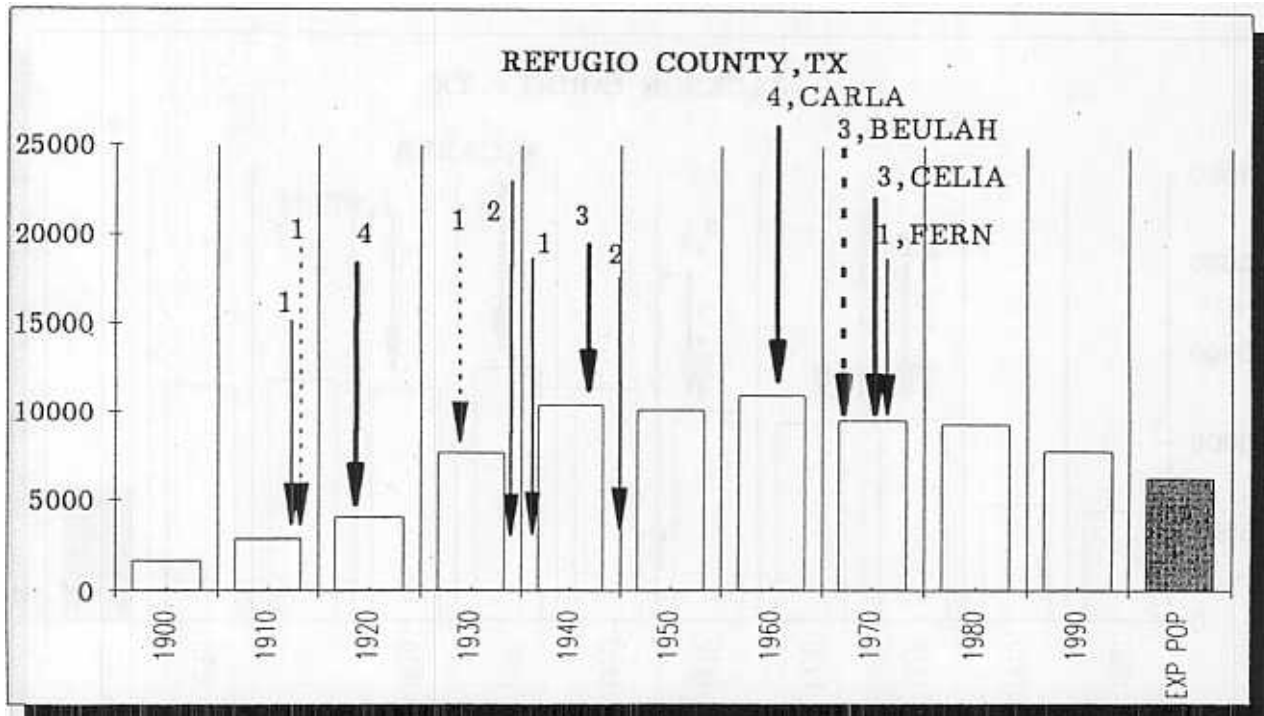
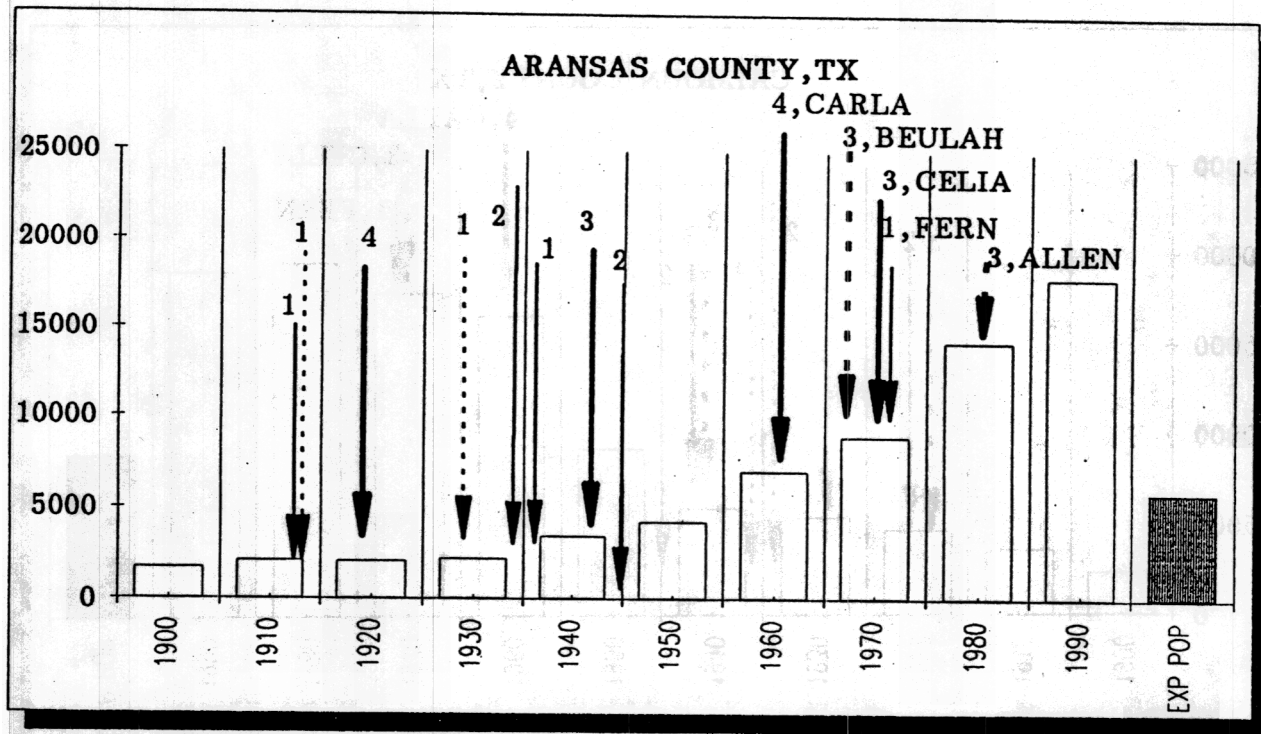
| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| | 16095 | 27158 | 36662 | 77540 | 83202 | 125170 | 151098 | 140368 | 209680 | 260120 | 167618 | 36 | 1980 |
| | | | 1033 | 10499 | 13230 | 20920 | 20084 | 15570 | 17495 | 17705 | 13986 | 21 | 1980 |
| | | | | 701 | 700 | 632 | 884 | 678 | 543 | 460 | 456 | 1 | 1967 |
| | | | 7837 | 12451 | 13344 | 21991 | 30052 | 33166 | 33358 | 30274 | 19884 | 34 | 1967 |
| | 10439 | 21955 | 22807 | 51779 | 92661 | 165471 | 221573 | 237544 | 268215 | 291145 | 156446 | 46 | 1970 |
| | 2372 | 7307 | 11386 | 23836 | 28871 | 35842 | 45021 | 47288 | 58013 | 58749 | 31144 | 47 | 1970 |
| | 1716 | 2106 | 2064 | 2219 | 3469 | 4252 | 7006 | 8902 | 14260 | 17892 | 5863 | 67 | 1970 |
| | 1641 | 2814 | 4050 | 7691 | 10383 | 10113 | 10975 | 9494 | 9289 | 7796 | 6253 | 20 | 1970 |
| | 2395 | 3635 | 4700 | 5385 | 5911 | 9222 | 16592 | 17831 | 19574 | 19053 | 8928 | 53 | 1961 |
| | 6094 | 6471 | 11244 | 10980 | 11720 | 12916 | 14040 | 12975 | 13352 | 13039 | 7442 | 43 | 1961 |
| | 6097 | 13594 | 16589 | 17678 | 20066 | 21559 | 25744 | 27913 | 37828 | 36928 | 13866 | 62 | 1961 |
| | 14861 | 13299 | 20614 | 23054 | 27069 | 46549 | 76204 | 108312 | 169587 | 191707 | 148397 | 23 | 1983 |
| | 44116 | 44479 | 53150 | 64401 | 81173 | 113066 | 140364 | 169812 | 195940 | 217399 | 170422 | 22 | 1983 |
| | 63786 | 115693 | 186667 | 359328 | 528961 | 806701 | 1243158 | 1741912 | 2409544 | 2818199 | 150151 | 95 | 1941 |
| | 3046 | 4234 | 4162 | 5710 | 7511 | 7871 | 10379 | 12187 | 18538 | 20088 | 16002 | 20 | 1983 |
| | 14239 | 38182 | 73120 | 133391 | 145329 | 195083 | 245659 | 246402 | 250938 | 239397 | | 100 | |
| | 5905 | 9528 | 15379 | 15149 | 17382 | 40567 | 60357 | 71170 | 83838 | 80509 | 26100 | 68 | 1957 |
| TX COASTAL TOTAL | 192802 | 310455 | 471464 | 821792 | 1090982 | 1637925 | 2319190 | 2901524 | 3809992 | 4320460 | 942959 | 78 | |
| TEXAS TOTAL | 3048710 | 3896542 | 4663228 | 5824715 | 6414824 | 7711194 | 9579677 | 11198655 | 14228383 | 16986510 | | | |

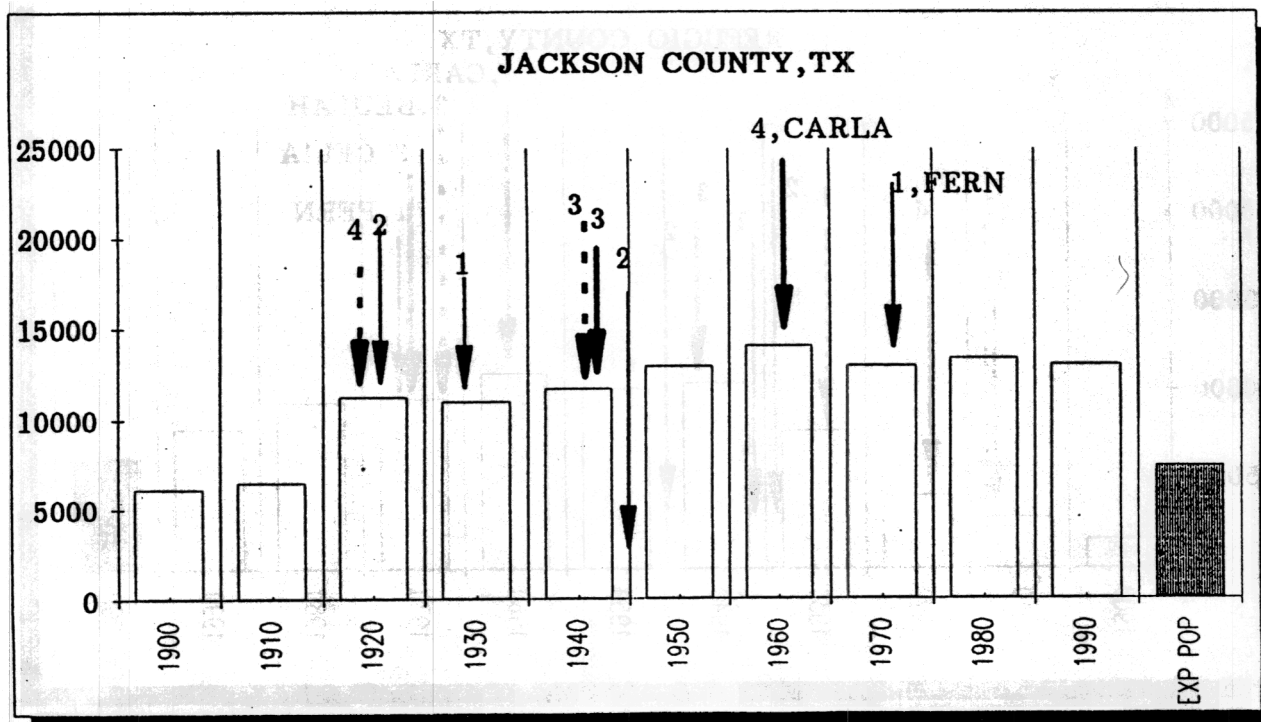
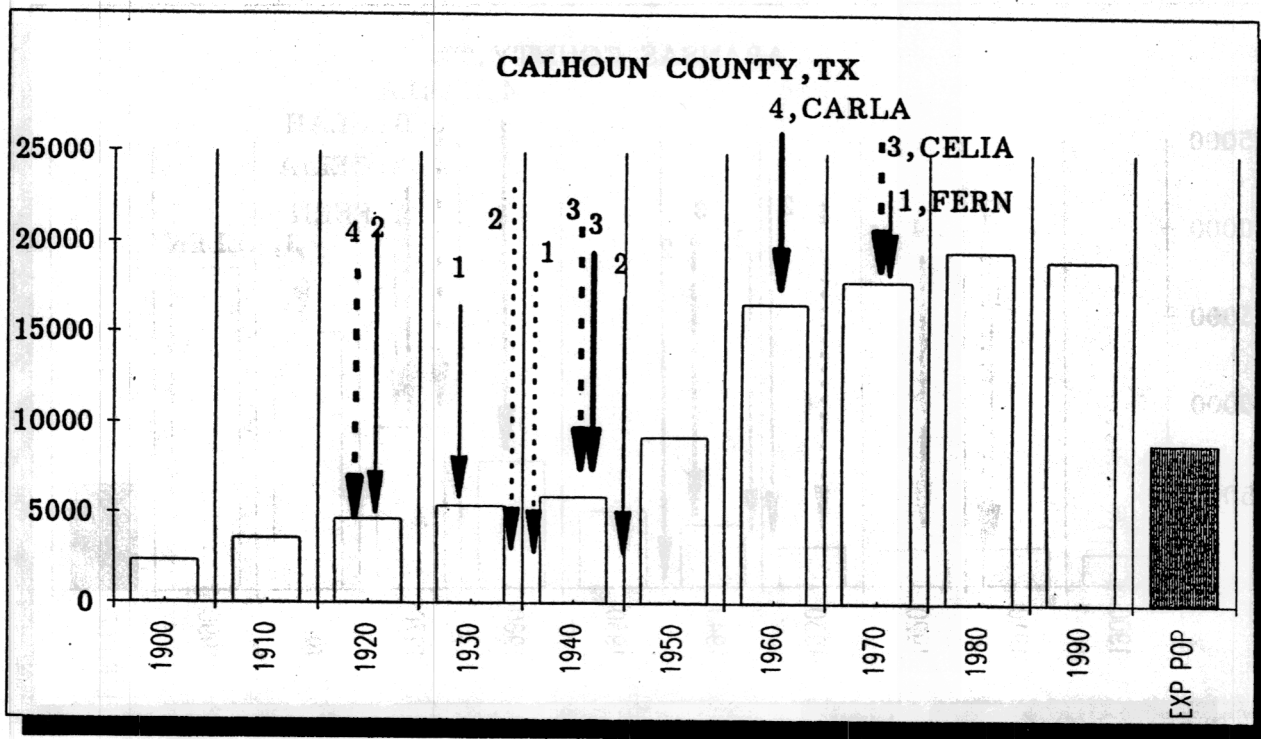


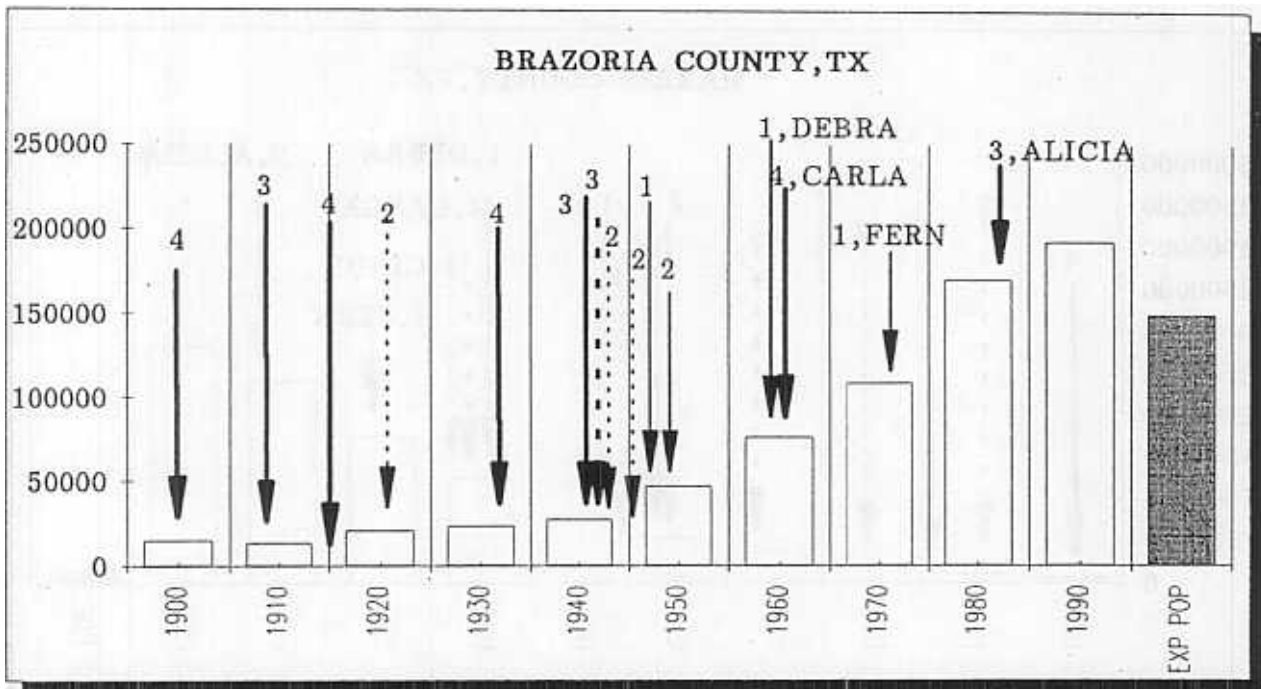
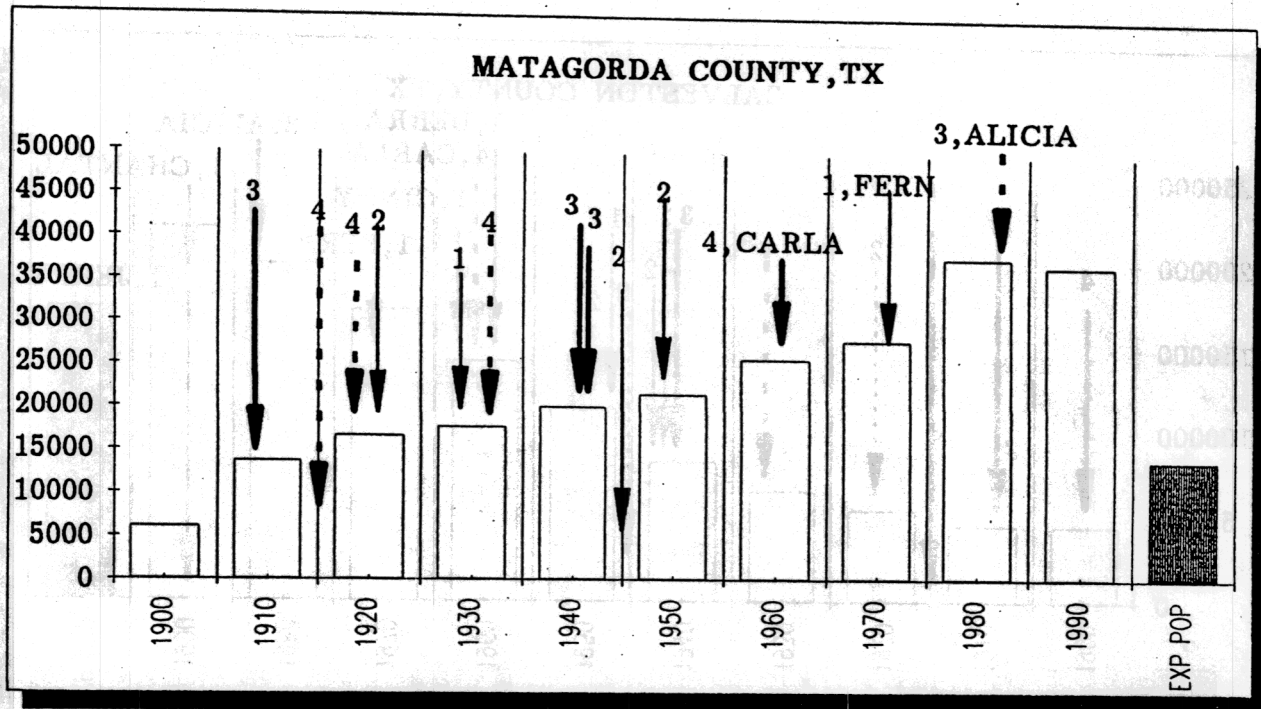


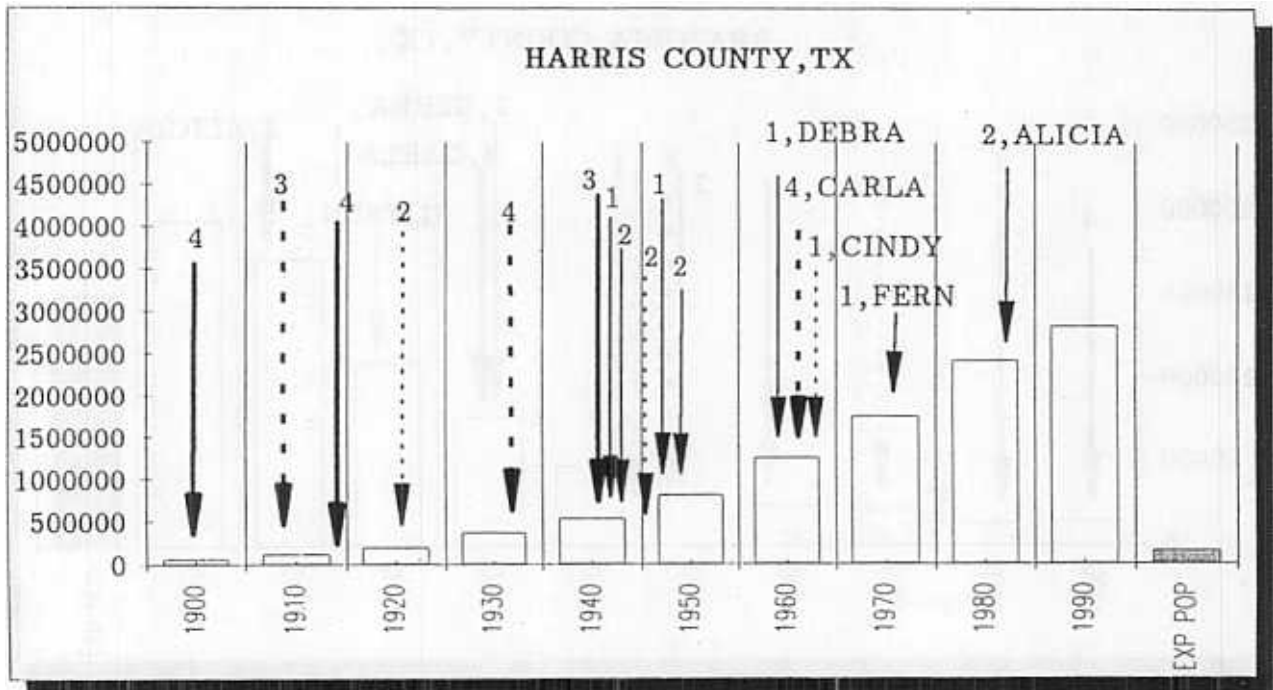
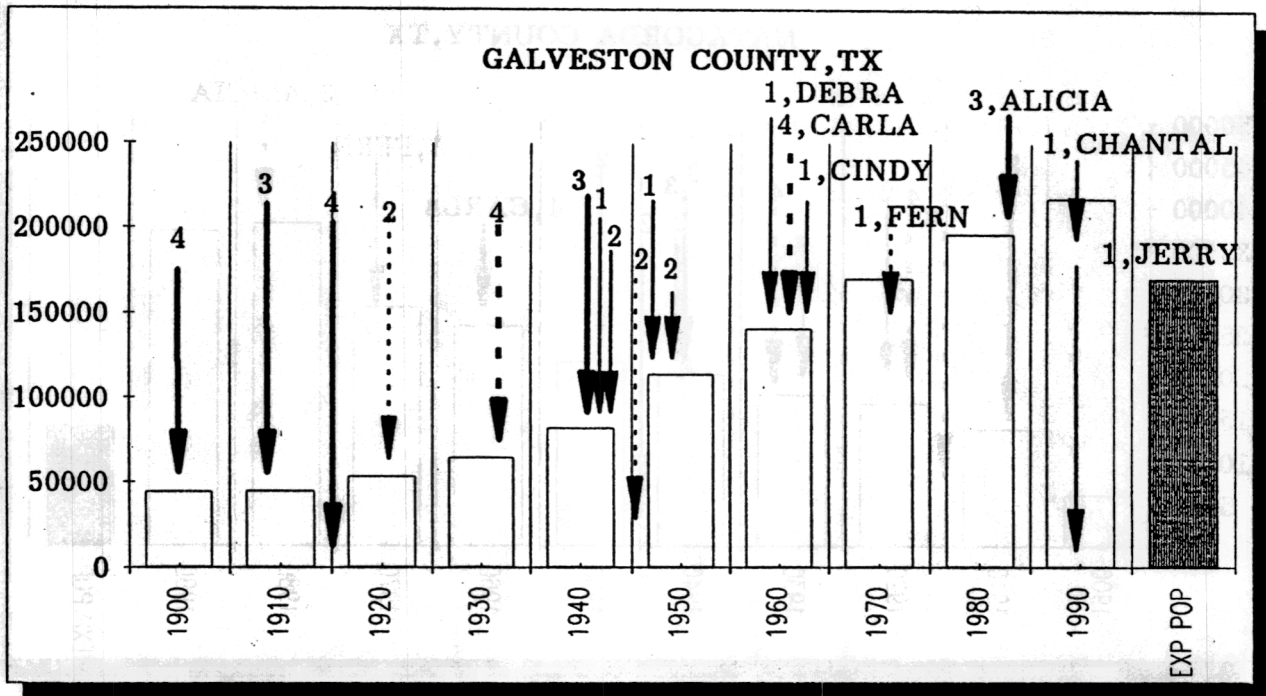


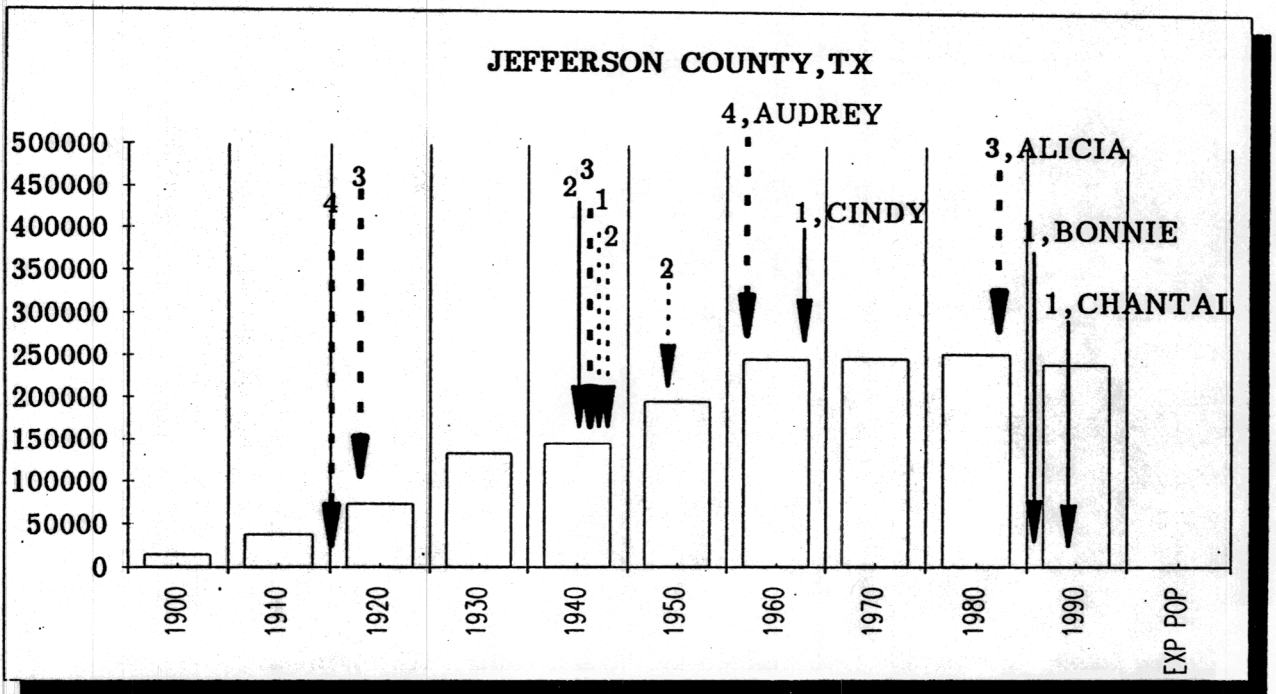
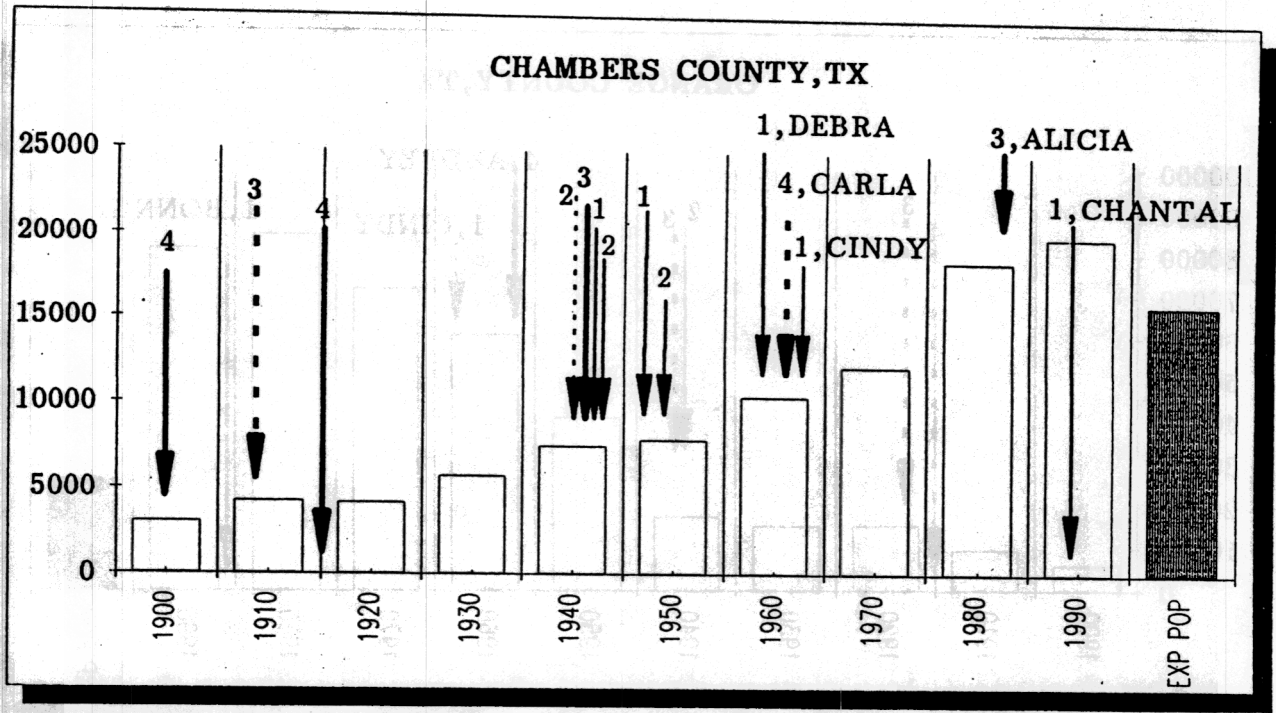




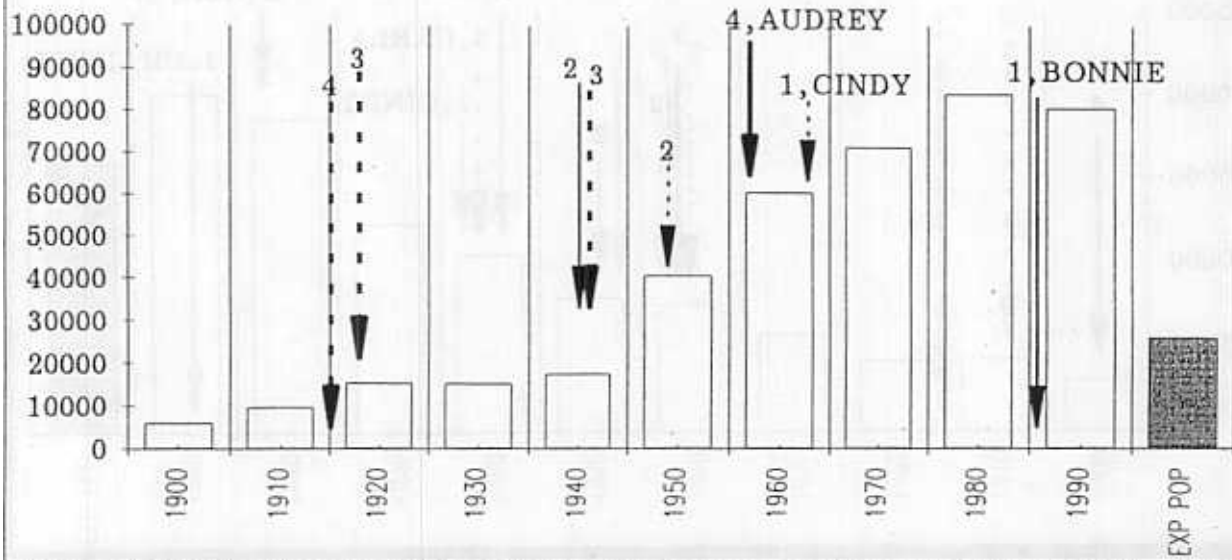








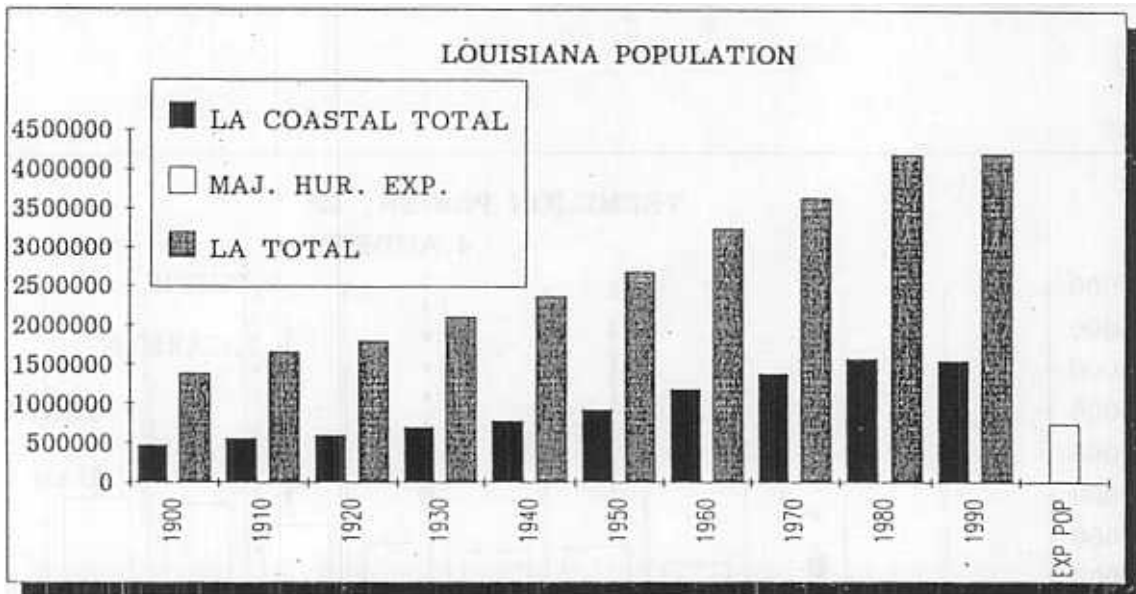
ORANGE COUNTY, TX

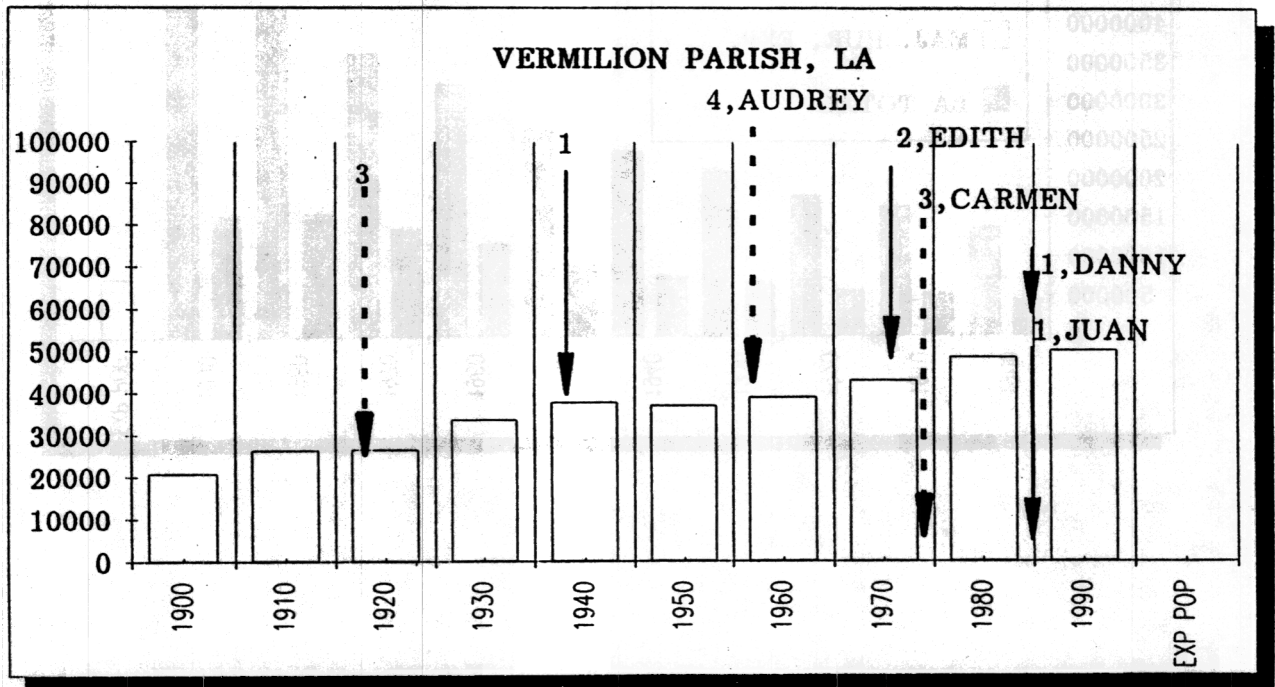
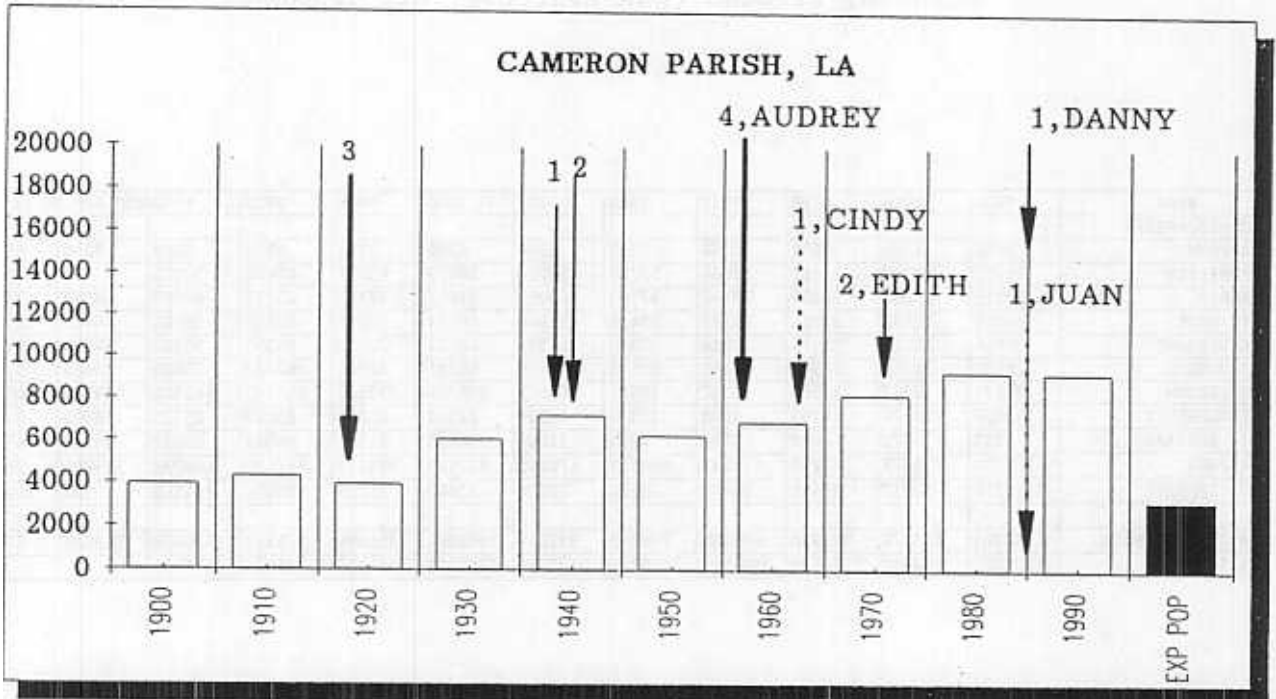


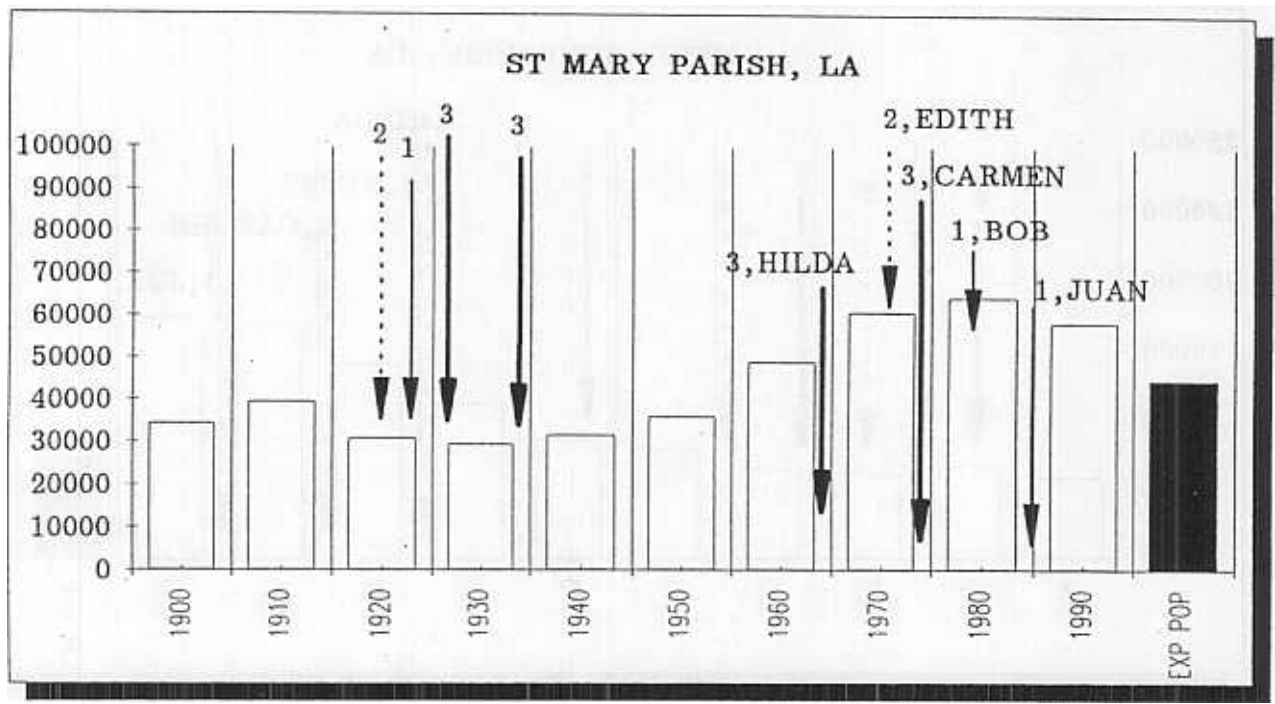
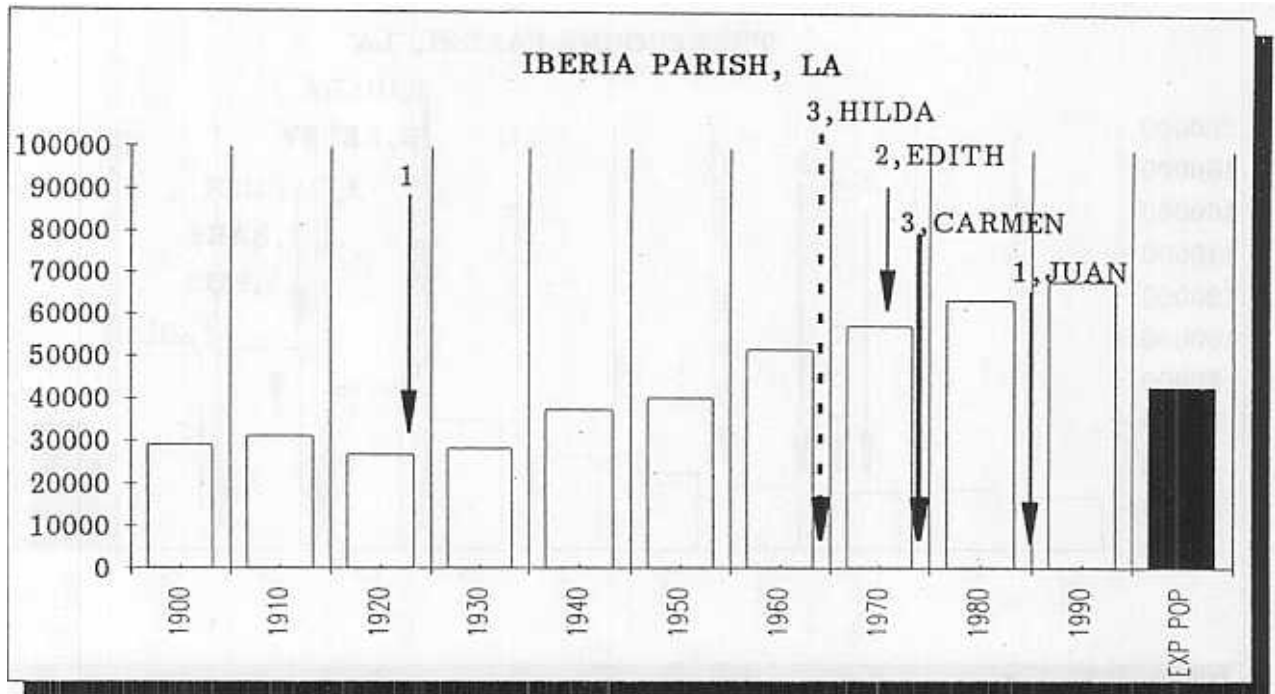
2. LOUISIANA (11)

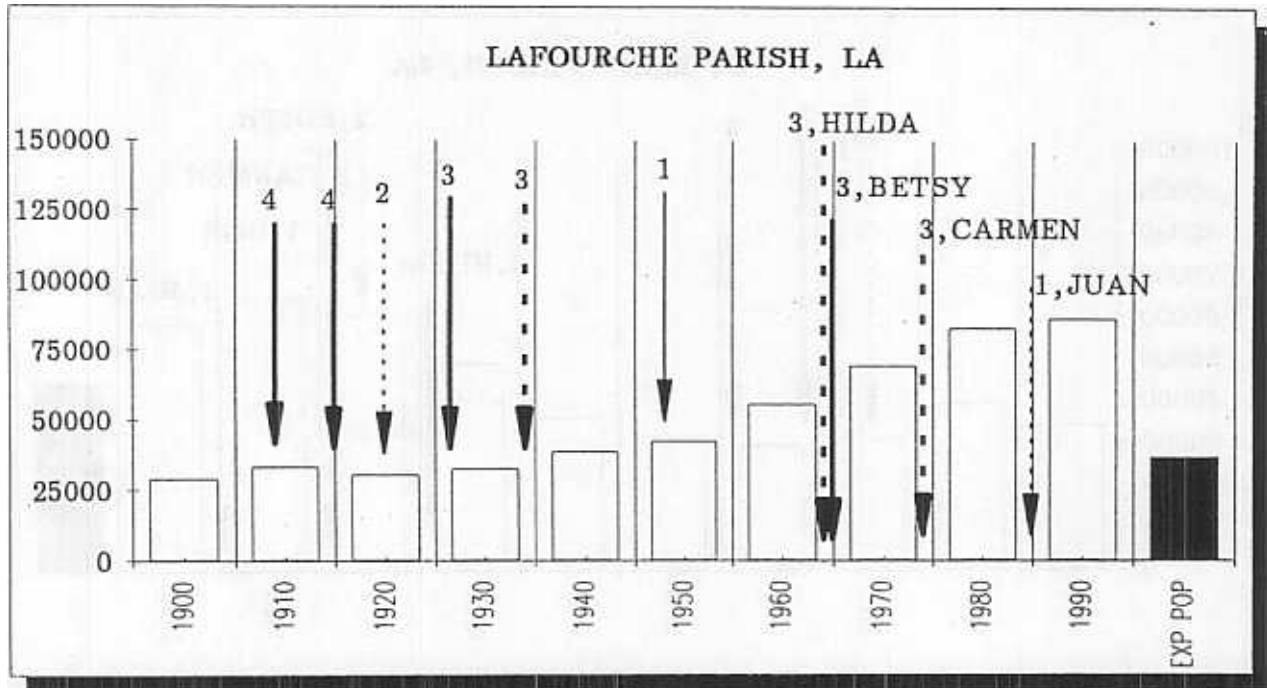
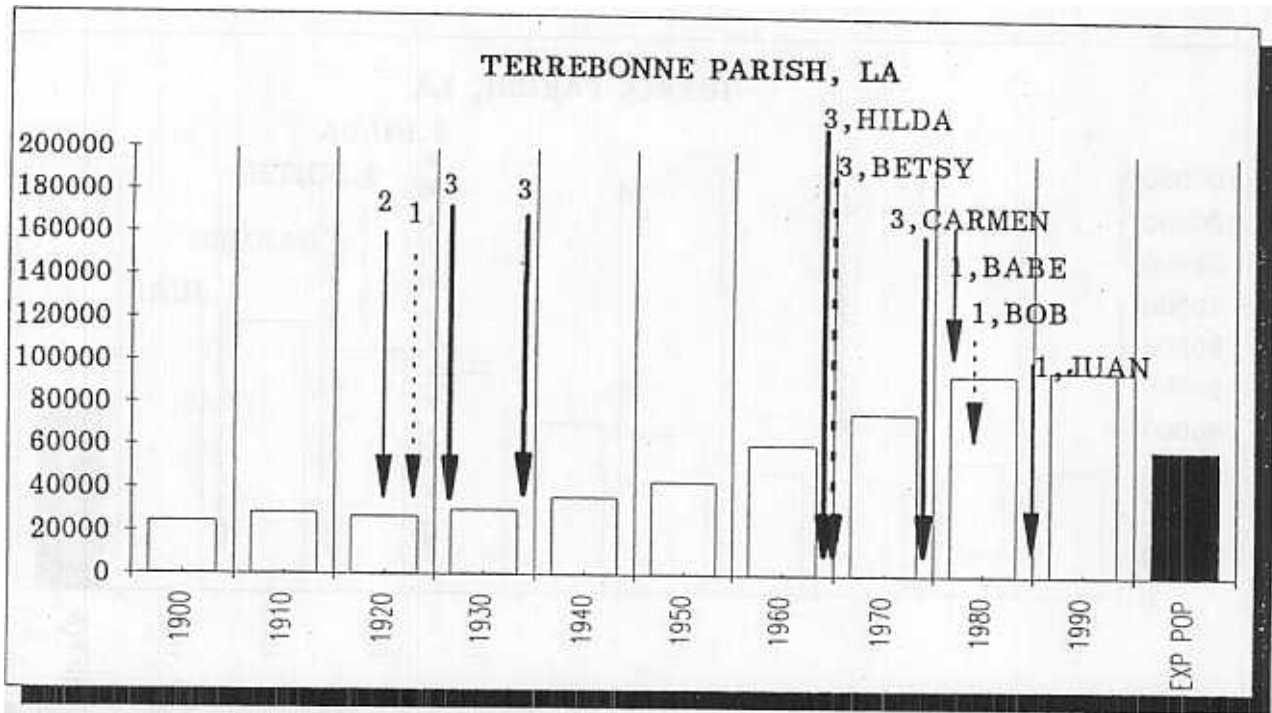
Cameron, Vermilion, Iberia, St. Mary (Morgan City),
Terrebonne, Lafourche, Jefferson, Plaquemines, St.
Bernard, Orleans (New Orleans), St. Tammany.

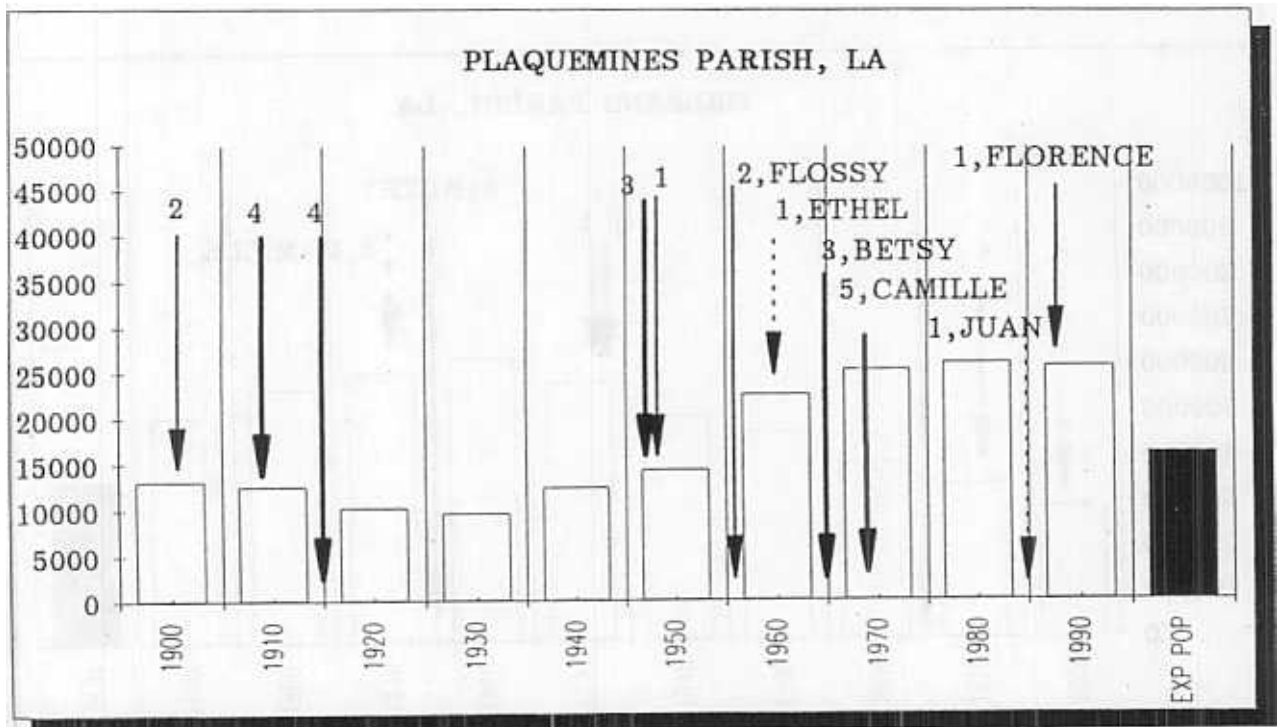
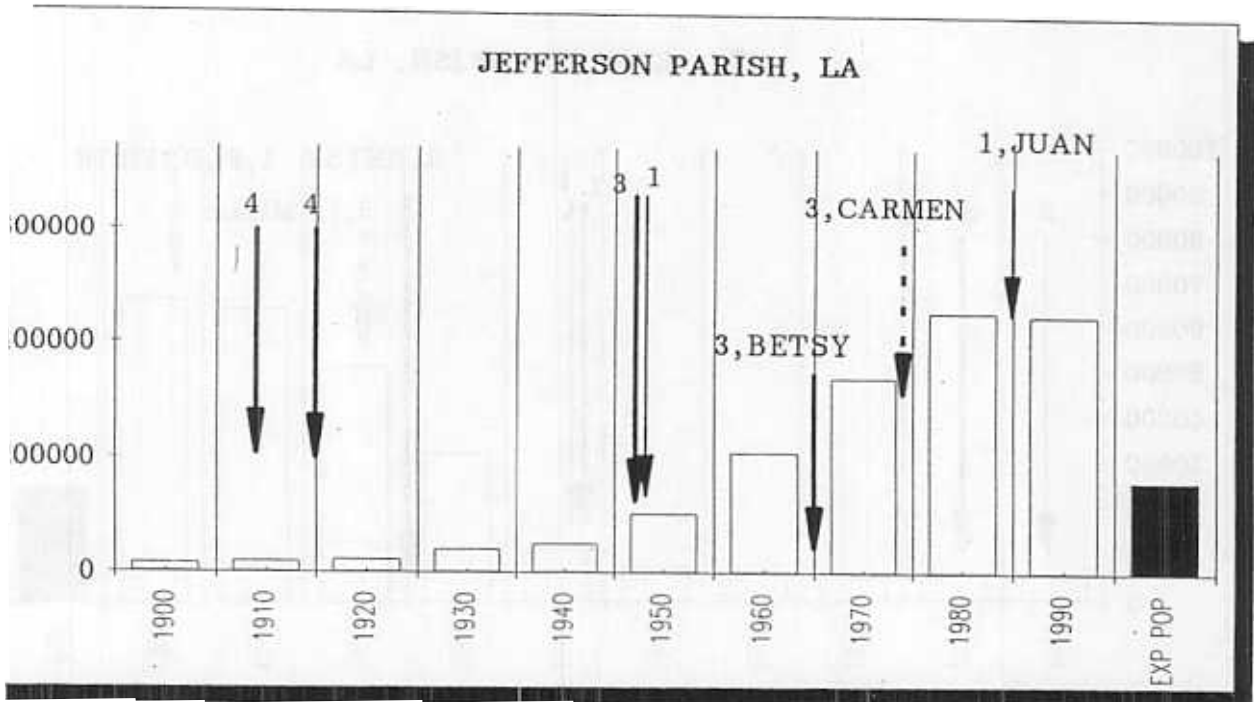
| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| CAMERON | 3952 | 4288 | 3952 | 6054 | 7203 | 6244 | 6909 | 8194 | 9336 | 9260 | 3218 | 65 | 1957 |
| VERMILION | 20705 | 26390 | 26482 | 33684 | 37750 | 36929 | 38855 | 43071 | 48458 | 50055 | | 100 | |
| IBERIA | 29015 | 31262 | 26855 | 28192 | 37183 | 40059 | 51657 | 57397 | 63752 | 68297 | 42838 | 37 | 1974 |
| ST. MARY | 34145 | 39368 | 30754 | 29397 | 31458 | 35848 | 48833 | 60752 | 64395 | 58086 | 44461 | 23 | 1974 |
| TERREBONNE | 24464 | 28320 | 26974 | 29816 | 35880 | 43328 | 60771 | 76049 | 94393 | 96982 | 59596 | 39 | 1974 |
| LAFORCHE | 28882 | 33111 | 30344 | 32419 | 38615 | 42209 | 55381 | 68941 | 82483 | 85860 | 36625 | 57 | 1965 |
| JEFFERSON | 15321 | 18247 | 21563 | 40032 | 50427 | 103873 | 208769 | 338229 | 454592 | 448306 | 161146 | 64 | 1965 |
| PLAQUEMINES | 13039 | 12524 | 10194 | 9608 | 12318 | 14239 | 22545 | 25225 | 26049 | 25575 | 16090 | 37 | 1969 |
| ST. BERNARD | 5031 | 5277 | 4968 | 6512 | 7280 | 11087 | 32186 | 51185 | 64097 | 66631 | 24561 | 63 | 1965 |
| ORLEANS | 287104 | 339075 | 387219 | 458762 | 494537 | 570445 | 627525 | 593471 | 557482 | 496938 | 359705 | 28 | 1965 |
| ST. TAMMANY | 13335 | 18917 | 20645 | 20929 | 23624 | 26988 | 38643 | 63585 | 110554 | 144508 | 580 | 100 | 1915 |
| LA COASTAL TOTAL | 474993 | 556779 | 589950 | 695405 | 776275 | 931249 | 1192074 | 1386099 | 1575591 | 1550498 | 748820 | 52 | |
| LA TOTAL | 1381625 | 1656388 | 1798509 | 2101593 | 2363880 | 2683516 | 3257022 | 3644637 | 4203972 | 4219973 | | | |

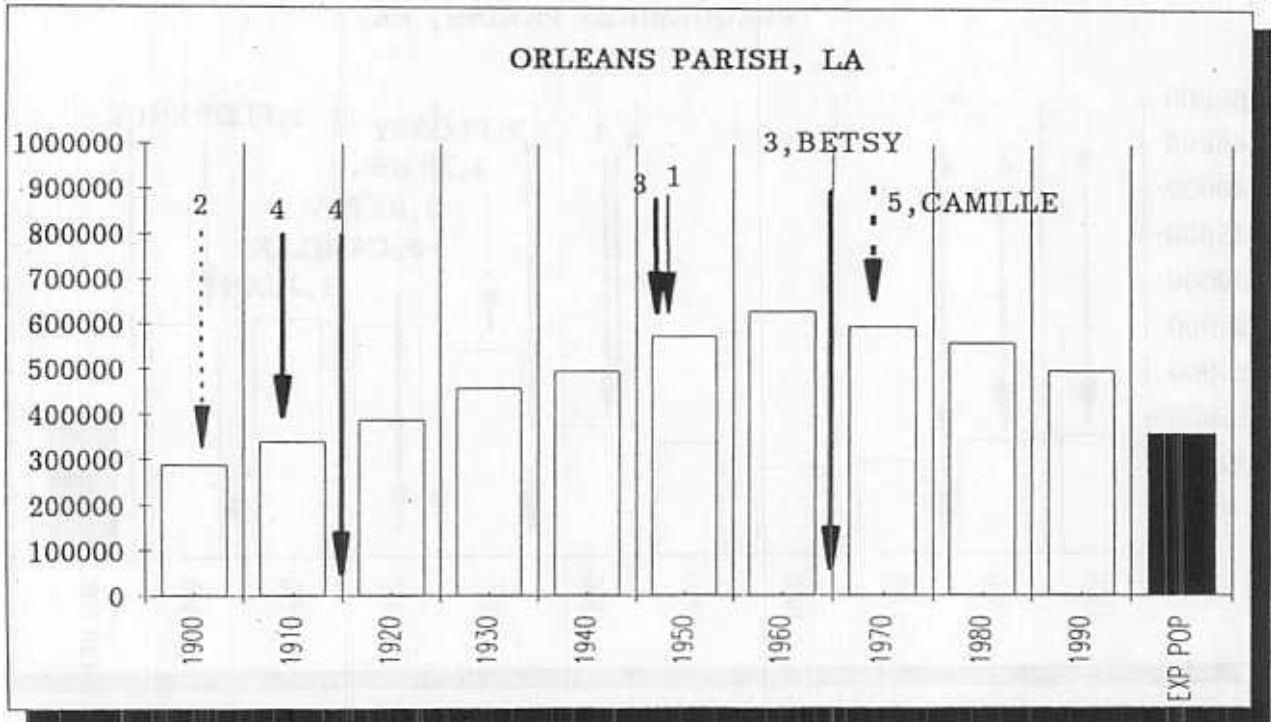
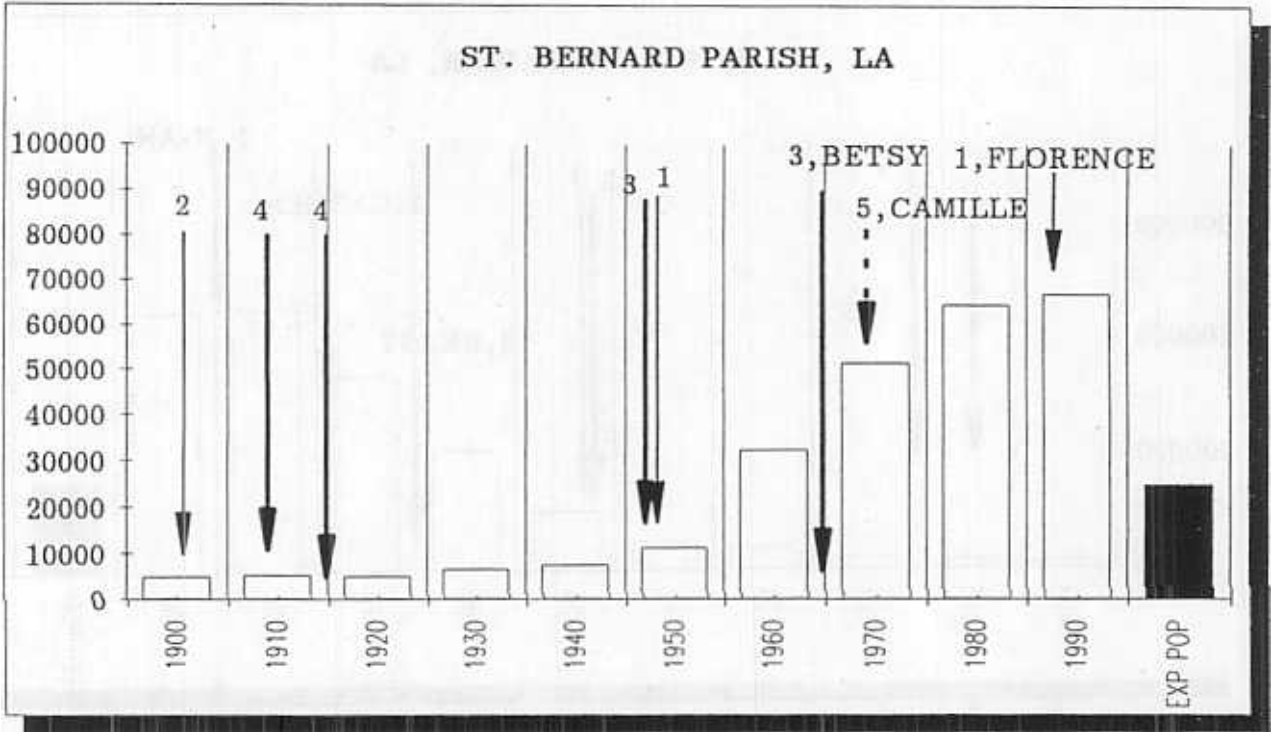




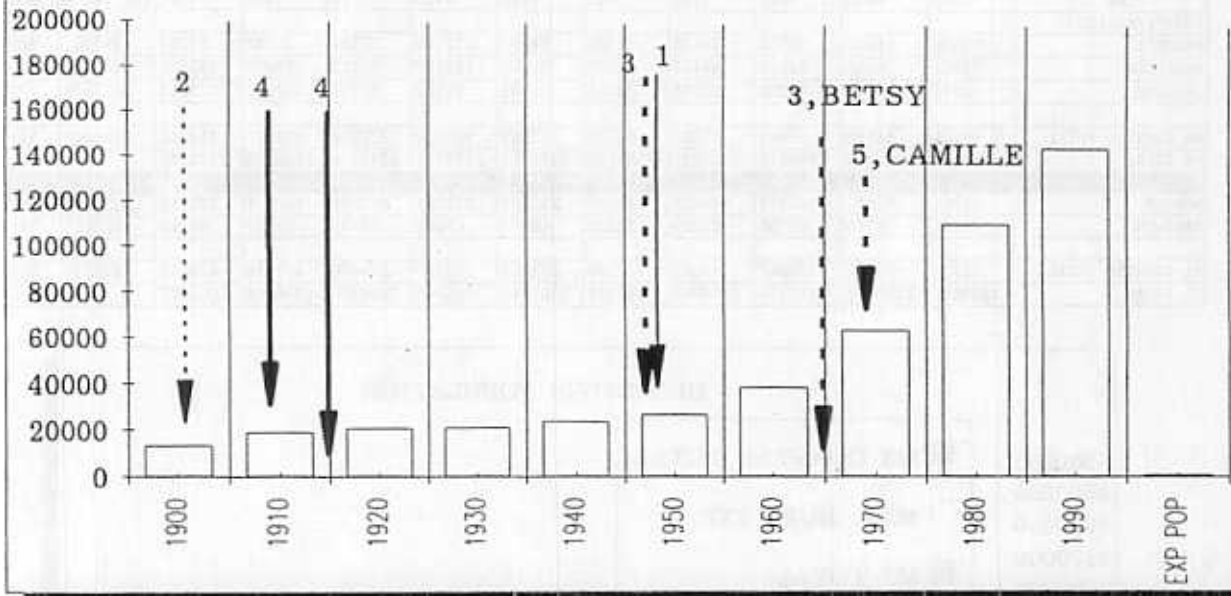








ST. TAMMANY PARISH, LA



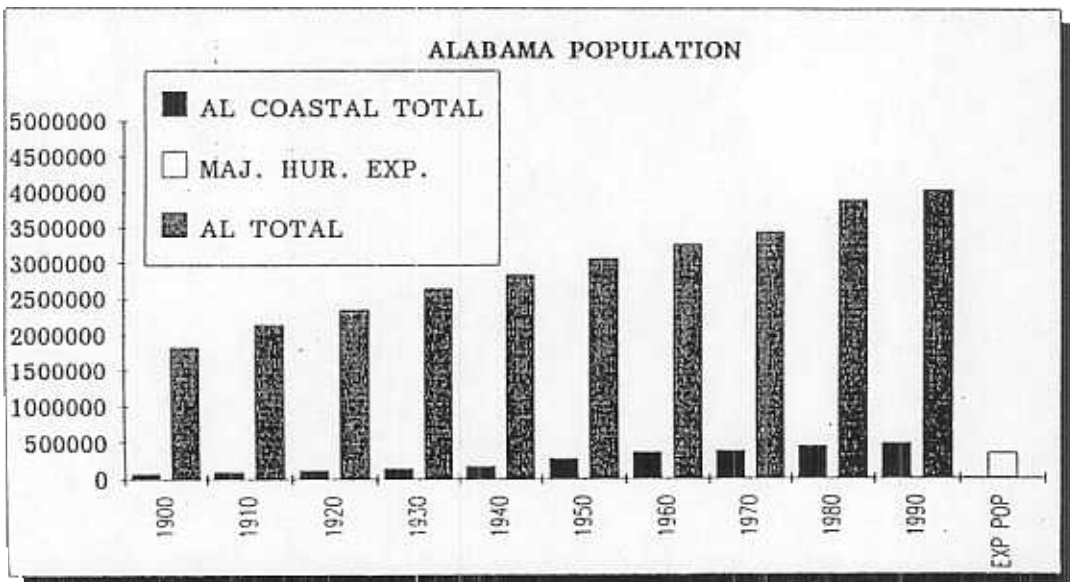
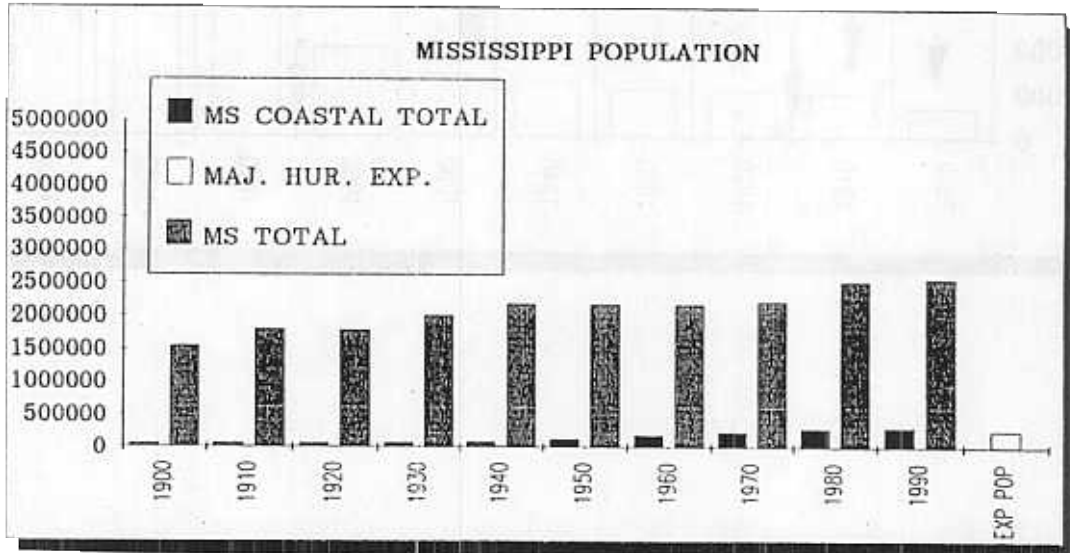
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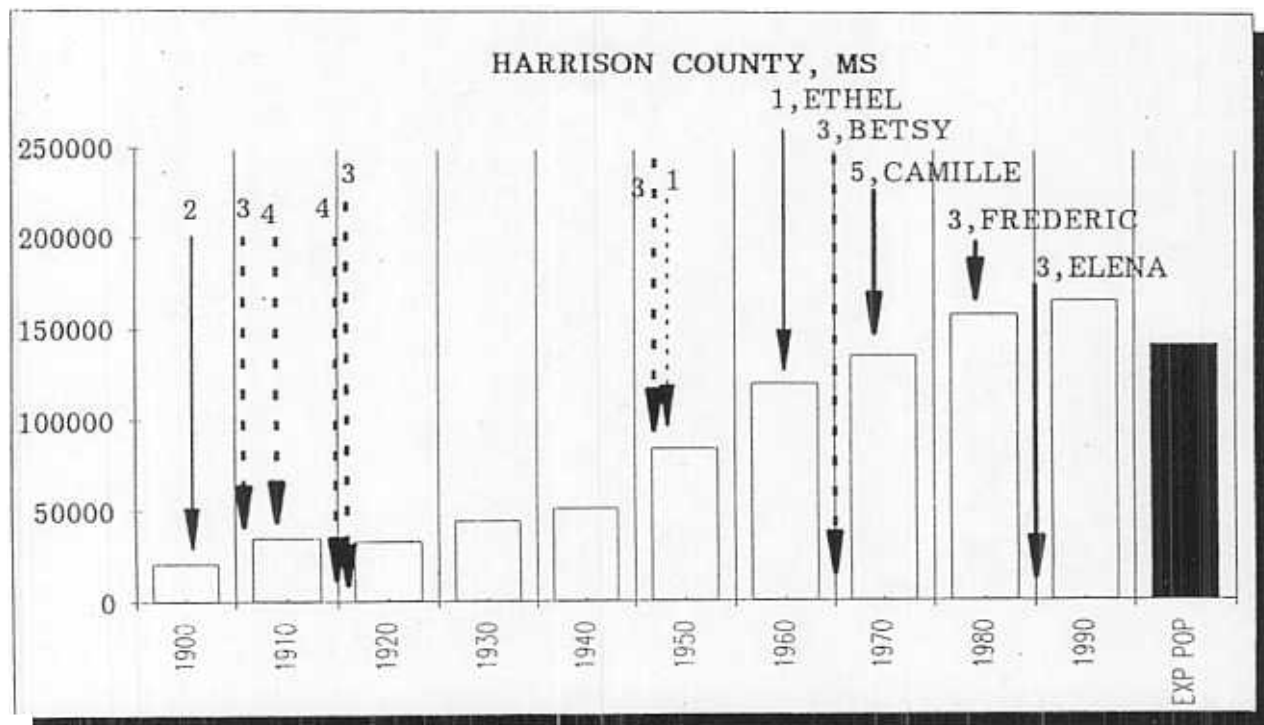
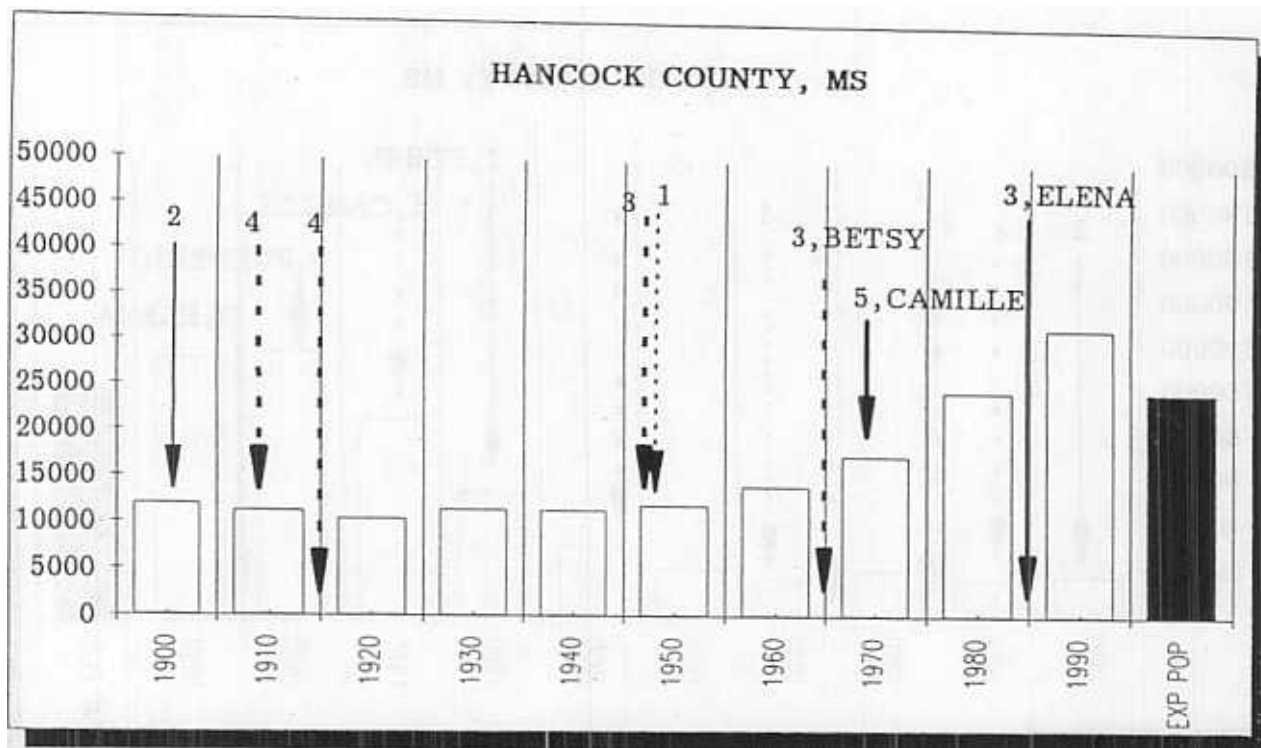
Hancock (Bay St. Louis), Harrison (Biloxi), Jackson (Pascagoula).

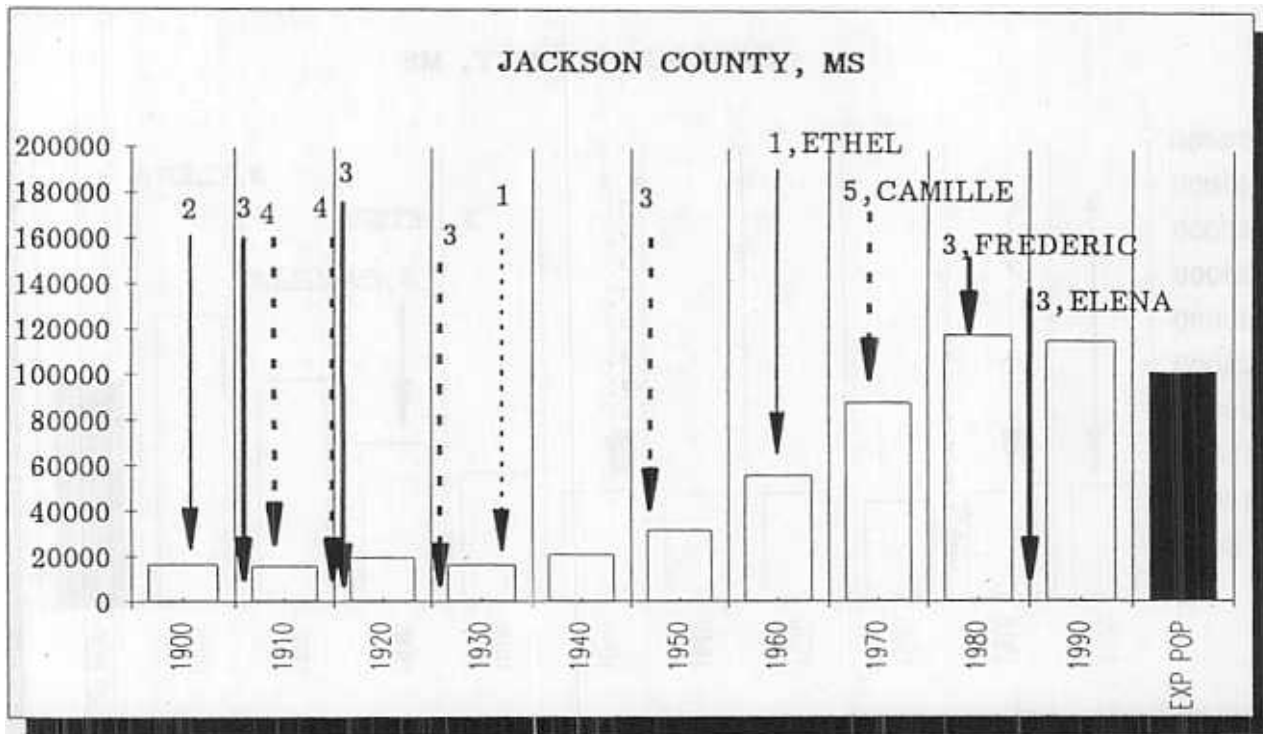
ALABAMA (2)

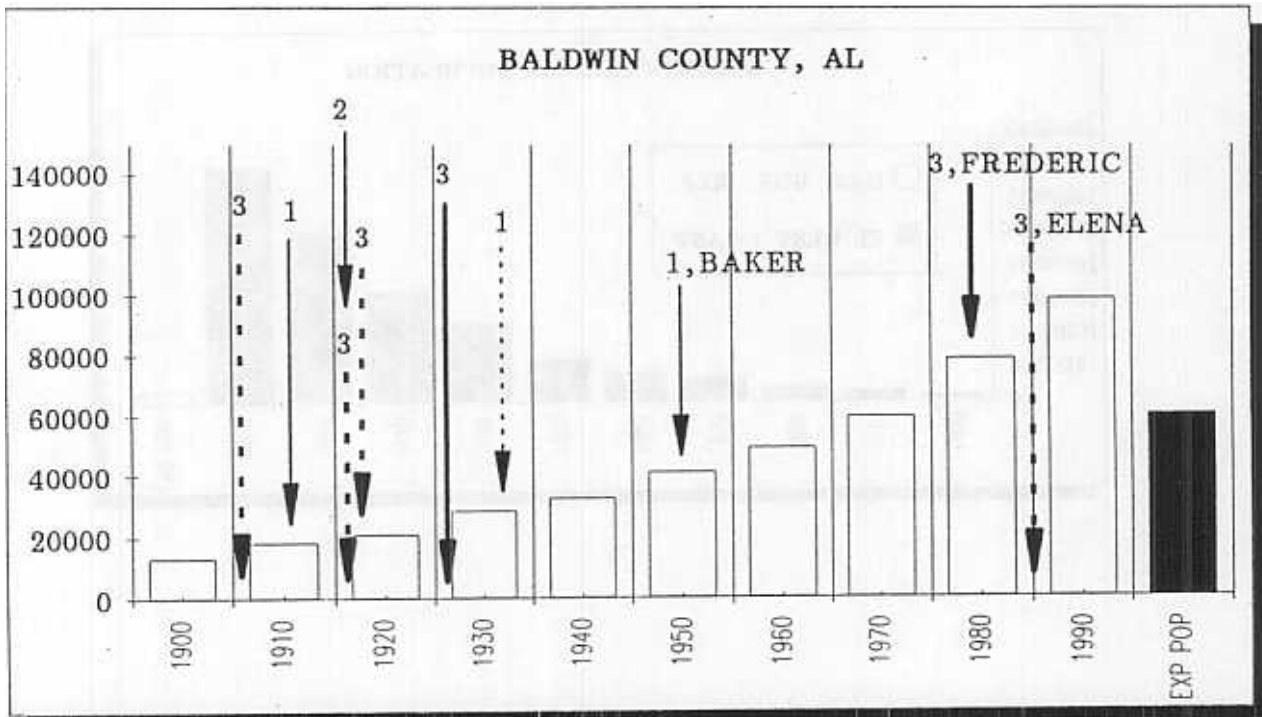
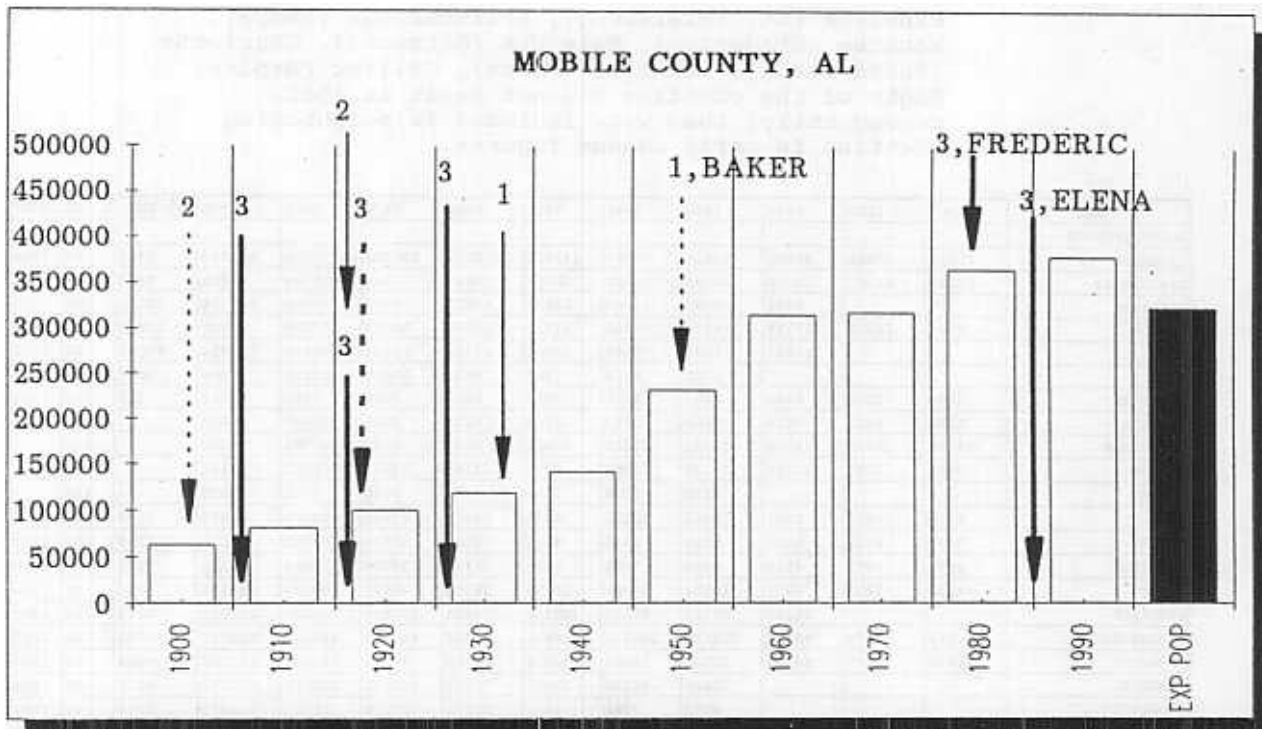
Mobile (Mobile), Baldwin.

| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| HANCOCK | 11886 | 11207 | 10380 | 11415 | 11328 | 11891 | 14039 | 17387 | 24537 | 31760 | 24506 | 23 | 1985 |
| HARRISON | 21002 | 34658 | 32855 | 44143 | 50799 | 84073 | 119489 | 134582 | 157665 | 165365 | 140615 | 15 | 1985 |
| JACKSON | 16513 | 15451 | 19208 | 15973 | 20601 | 31401 | 55522 | 87975 | 118015 | 115243 | 101537 | 12 | 1985 |
| MS COASTAL TOTAL | 49401 | 61316 | 62443 | 71531 | 82728 | 127365 | 189050 | 239944 | 300217 | 312368 | 266658 | 15 | |
| MS TOTAL | 1551270 | 1797114 | 1790618 | 2009821 | 2183796 | 2178914 | 2178141 | 2216994 | 2520698 | 2573216 | | | |
| MOBILE | 62740 | 80854 | 100117 | 118363 | 141974 | 231105 | 314301 | 317308 | 364379 | 378643 | 323437 | 15 | 1985 |
| BALDWIN | 13194 | 18178 | 20730 | 28289 | 32324 | 40997 | 49088 | 59382 | 78440 | 98280 | 60095 | 39 | 1979 |
| AL COASTAL TOTAL | 75934 | 99032 | 120847 | 146652 | 174298 | 272102 | 363389 | 376690 | 442819 | 476923 | 383532 | 20 | |
| AL TOTAL | 1828697 | 2138093 | 2348174 | 2646248 | 2832961 | 3061743 | 3266740 | 3444354 | 3894046 | 4040587 | | | |





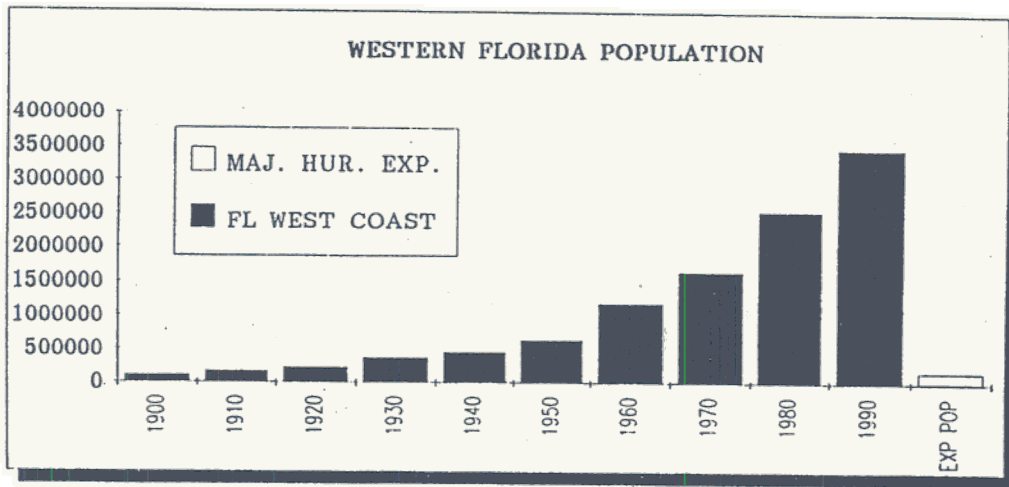


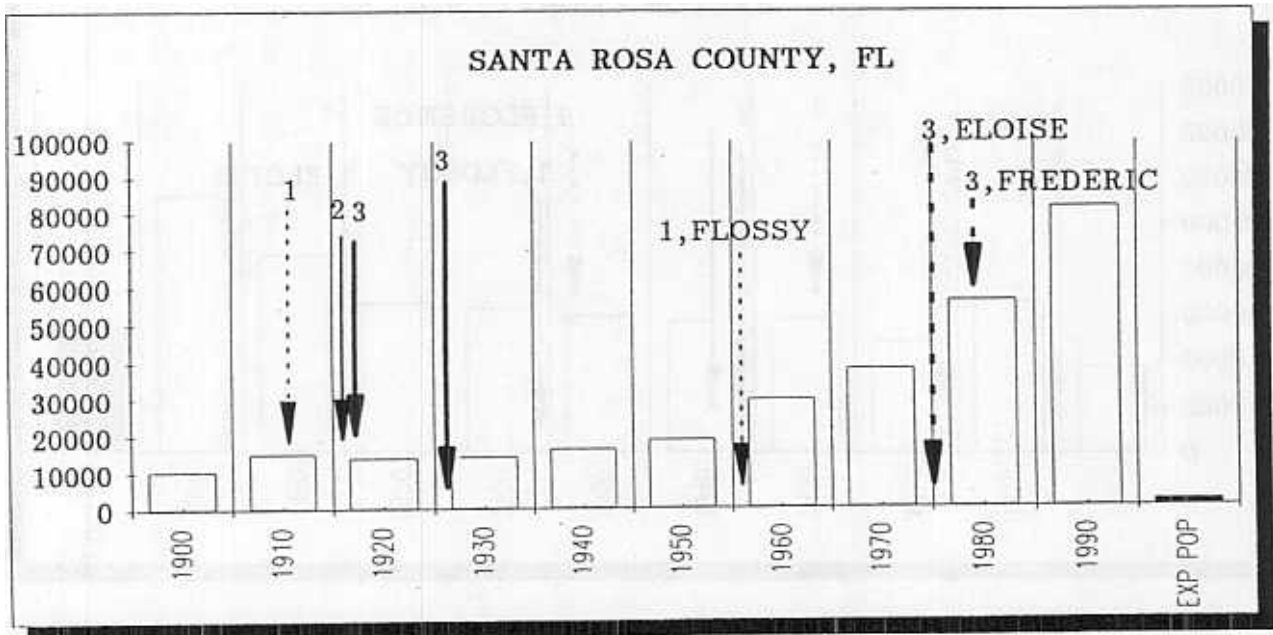
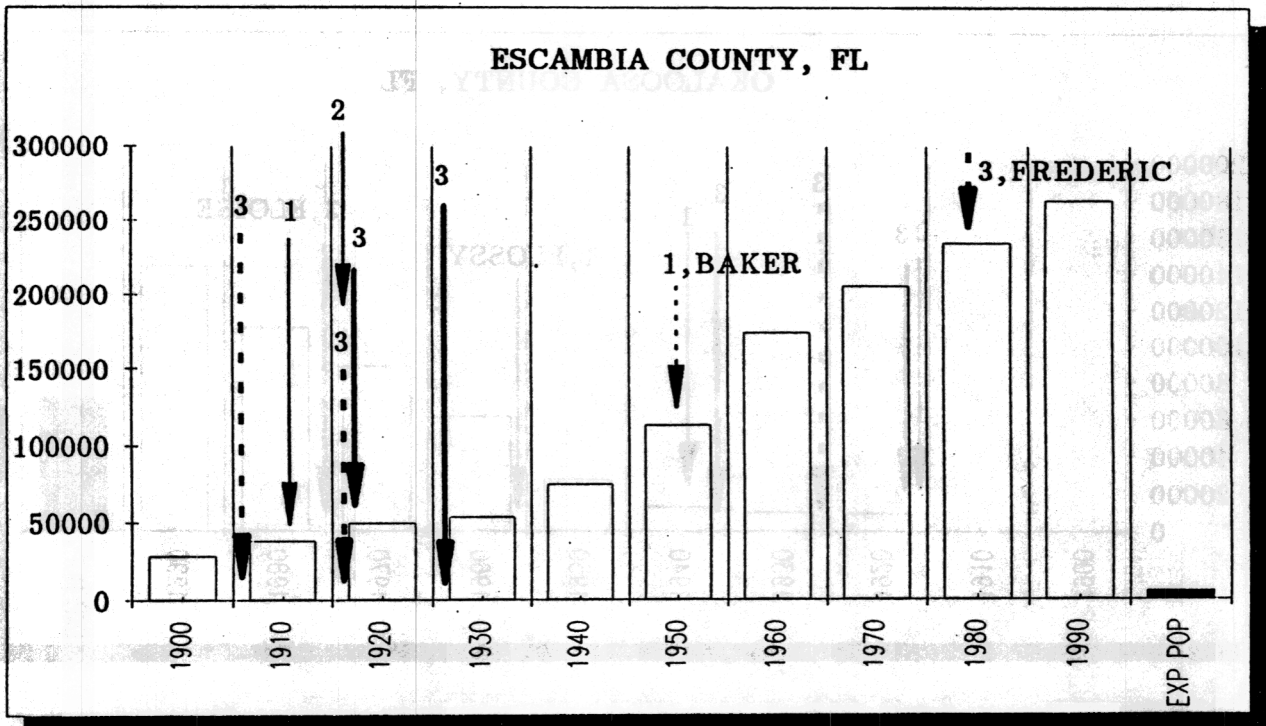


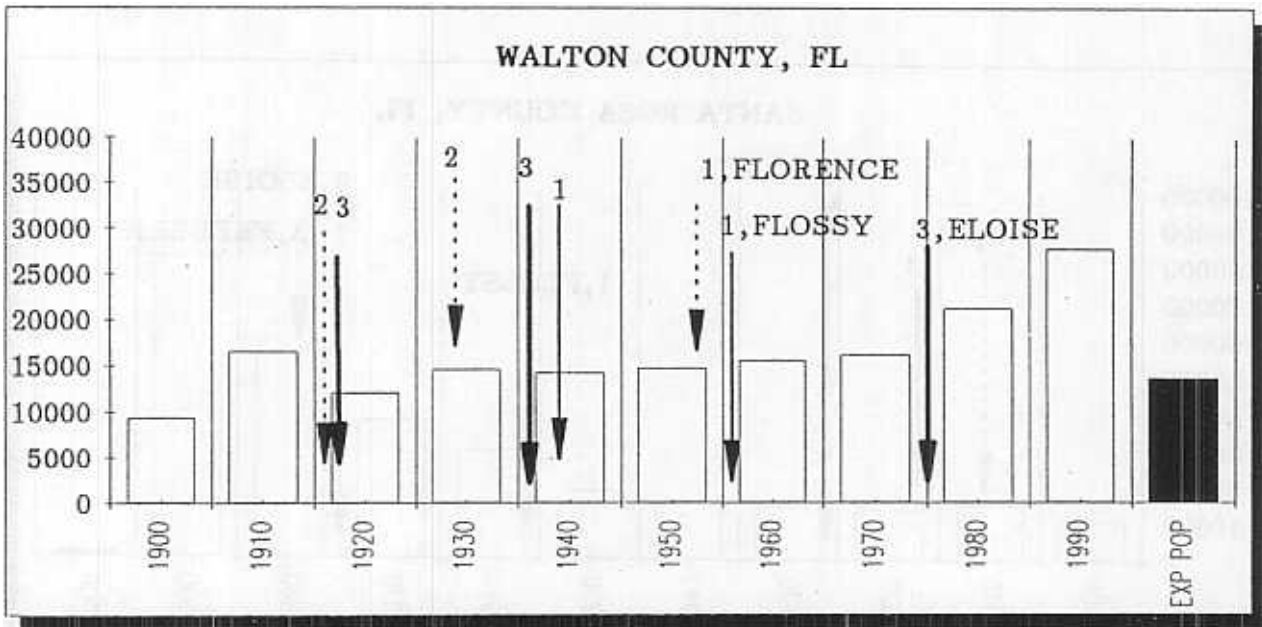
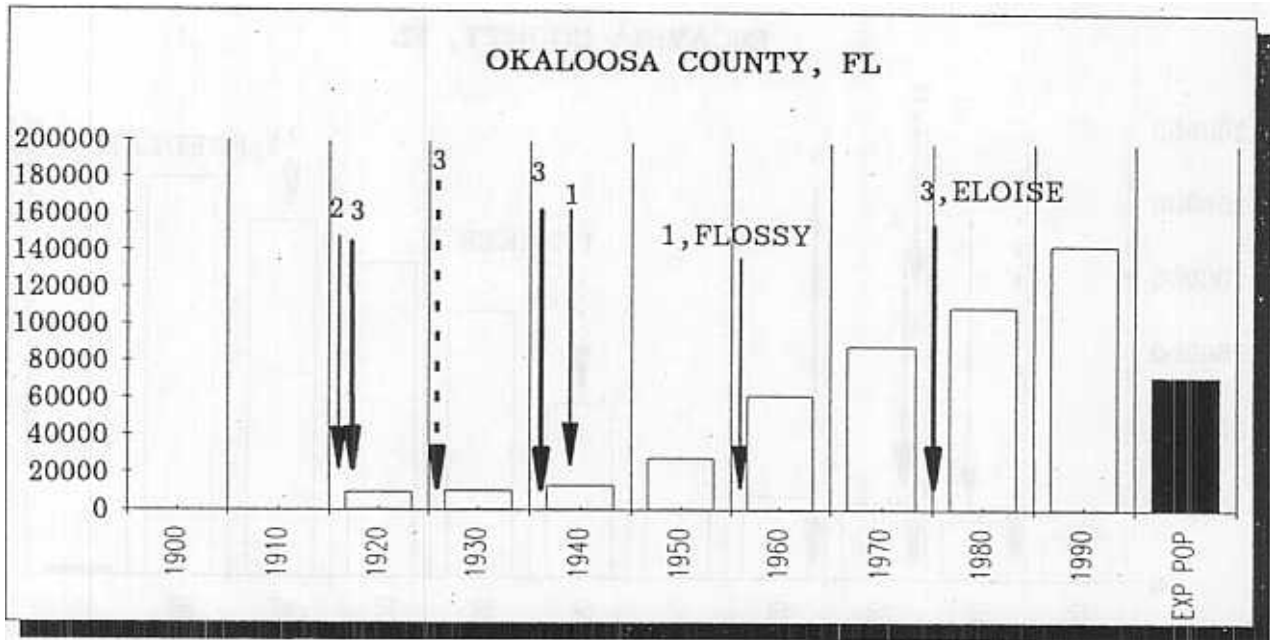
4. FLORIDA West Coast (Escambia through Collier) (22)

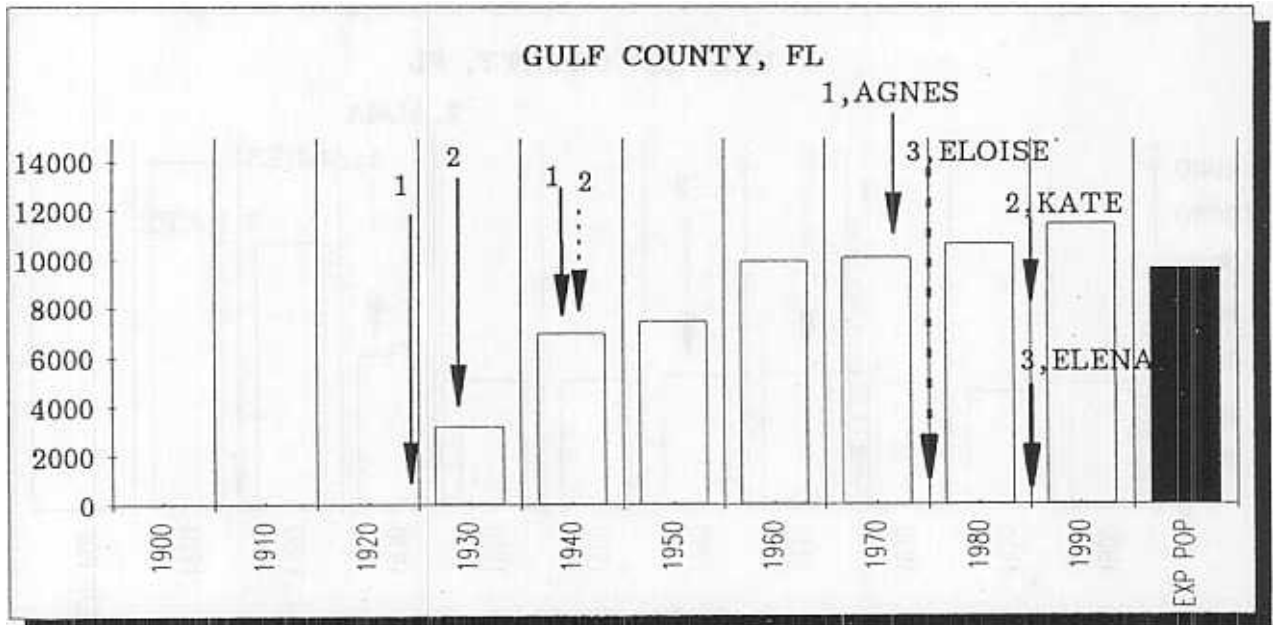
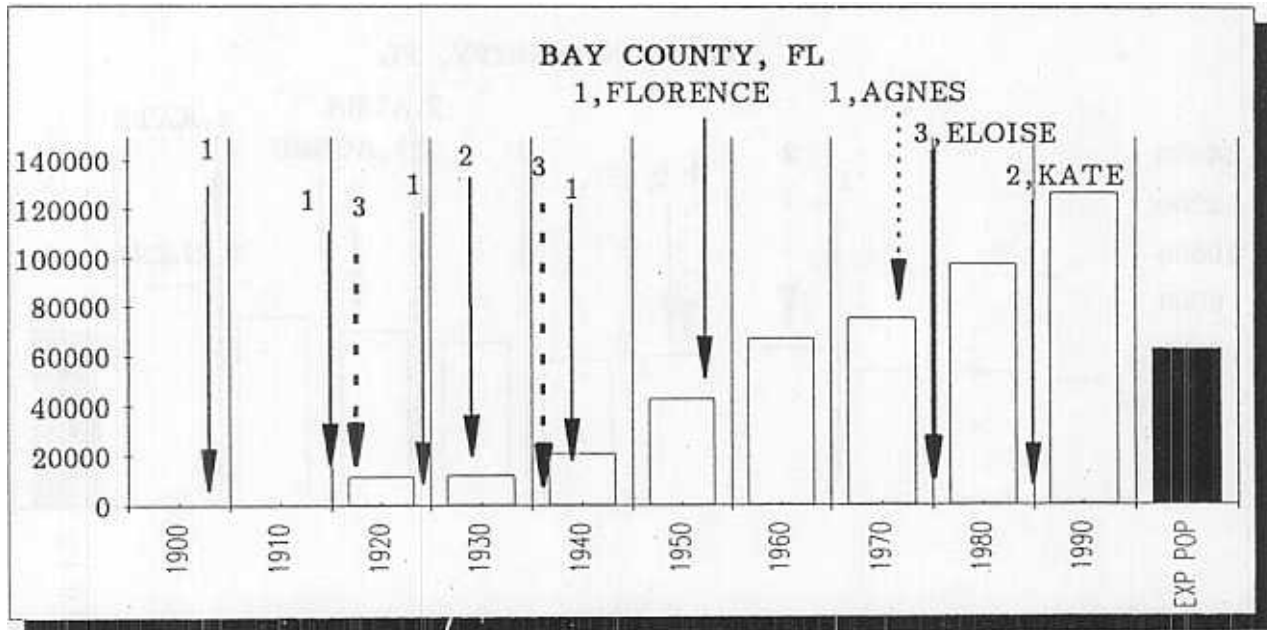
Escambia (Pensacola), Santa Rosa, Okaloosa, Walton, Bay (Panama City), Gulf, Franklin (Apalachicola), Wakulla, Jefferson, Taylor, Dixie, Levy (Cedar Key), Citrus (Homosassa), Hernando, Pasco (New Port Richey), Pinellas (St. Petersburg), Hillsborough (Tampa), Manatee (Bradenton), Sarasota (Sarasota), Charlotte (Punta Gorda), Lee (Fort Myers), Collier (Naples)
 Eight of the counties did not exist in 1900, consequently, they were included in neighboring counties in early census figures.

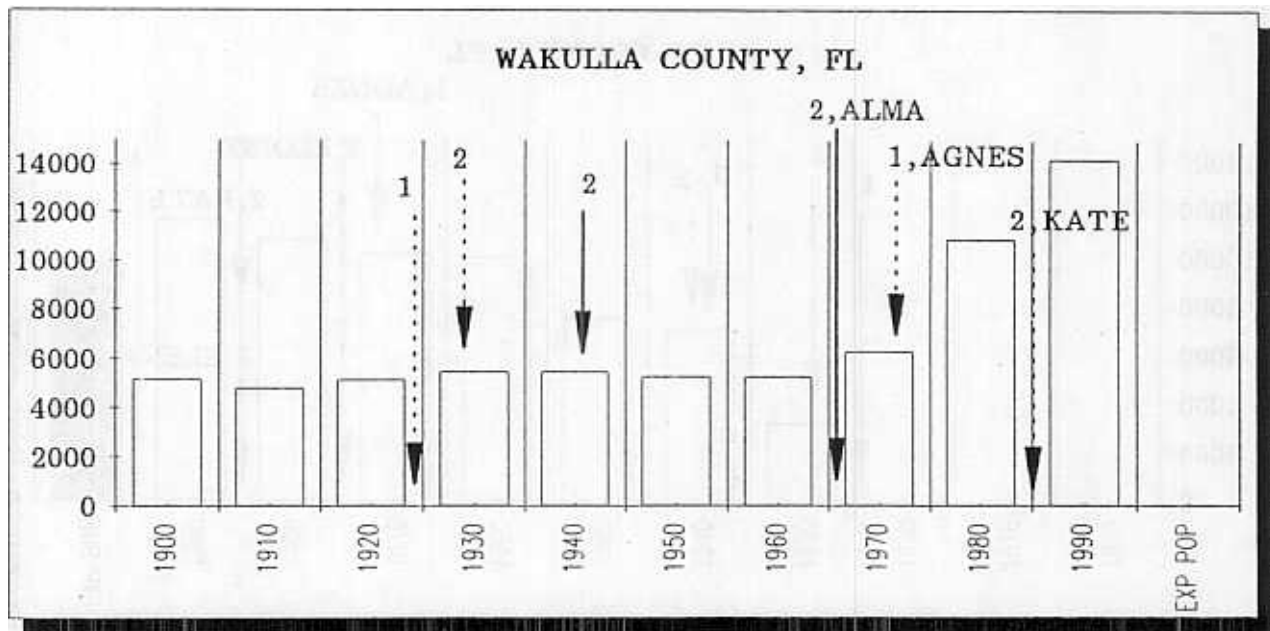
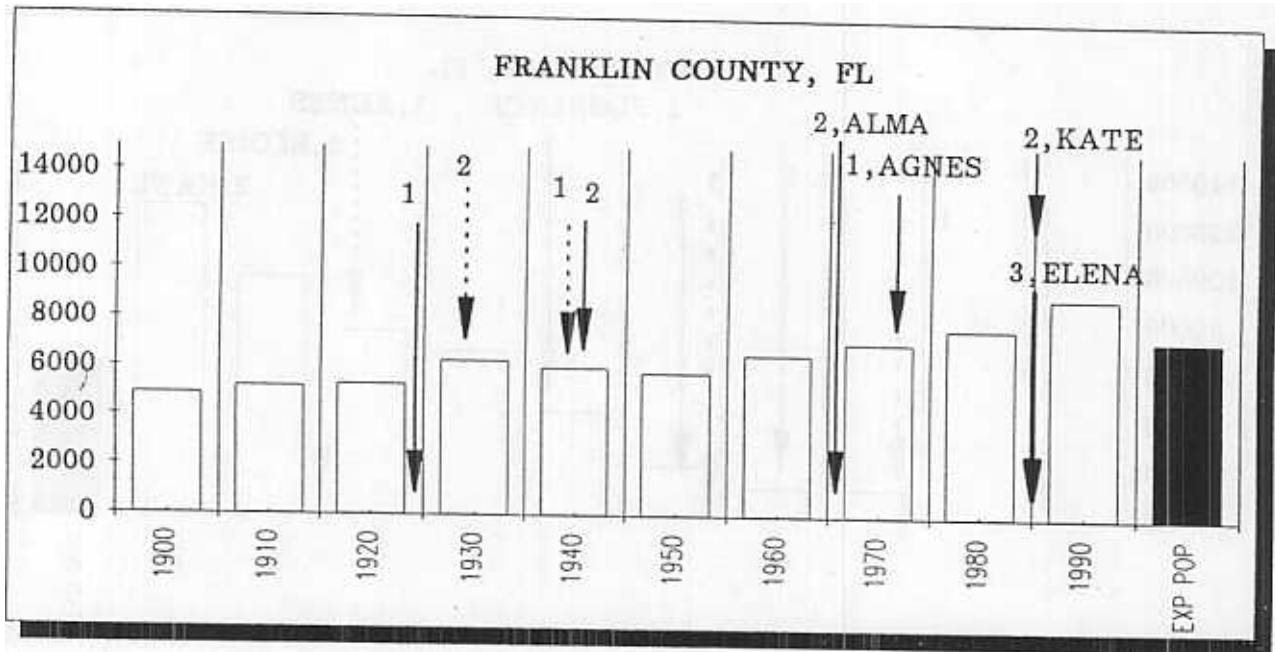
| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|---------------|--------|--------|--------|---------|---------|---------|---------|---------|---------|----------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| ESCAMBIA | 28313 | 38029 | 49386 | 53594 | 74667 | 112706 | 173829 | 205334 | 233794 | 262798 | 5419 | 98 | 1926 |
| SANTA ROSA | 10293 | 14897 | 13670 | 14083 | 16085 | 18554 | 29547 | 37741 | 55988 | 81608 | 1453 | 98 | 1926 |
| OKALOOSA | | | 9360 | 9897 | 12900 | 27533 | 61175 | 88187 | 109920 | 143776 | 72180 | 50 | 1975 |
| WALTON | 9346 | 16460 | 12119 | 14576 | 14246 | 14725 | 15576 | 16087 | 21300 | 27760 | 13622 | 51 | 1975 |
| | | | 11407 | 12091 | 20686 | 42689 | 67131 | 75283 | 97740 | 126994 | 63041 | 50 | 1975 |
| | | | | 3182 | 6951 | 7460 | 9937 | 10096 | 10658 | 11504 | 9647 | 16 | 1985 |
| | 4890 | 5201 | 5318 | 6283 | 5991 | 5814 | 6576 | 7065 | 7661 | 8967 | 7238 | 19 | 1985 |
| | 5149 | 4802 | 5129 | 5468 | 5463 | 5258 | 5257 | 6308 | 10887 | 14202 | | 100 | |
| | 16195 | 17210 | 14502 | 13408 | 12032 | 10413 | 9543 | 8778 | 10703 | 11296 | | | |
| | 3999 | 7103 | 11219 | 13136 | 11565 | 10416 | 13168 | 13641 | 16532 | 17111 | | 100 | |
| | | | | 6419 | 7018 | 3928 | 4479 | 5480 | 7751 | 10585 | | 100 | |
| | 8603 | 10361 | 9921 | 12456 | 12550 | 10637 | 10364 | 12756 | | | 4102 | 84 | 1950 |
| | 5391 | 6731 | 5220 | 5515 | 5846 | 6111 | 9268 | 19196 | 54703 | 93515 | 2356 | 97 | 1950 |
| HERNANDO | 3638 | 4997 | 4548 | 4948 | 5641 | 6693 | 11205 | 17004 | 44469 | 101115 | 2581 | 97 | 1950 |
| PASCO | 6054 | 7502 | 8802 | 10574 | 13981 | 20529 | 36785 | 75955 | 194123 | 281131 | 7916 | 97 | 1950 |
| PINELLAS | | | 28265 | 62149 | 91852 | 159249 | 374665 | 522329 | 728409 | 851659 | 2026 | 100 | 1921 |
| HILLSBOROUGH | 36013 | 78374 | 88257 | 153519 | 180148 | 249894 | 397788 | 490265 | 646960 | 834054 | 6066 | 99 | 1921 |
| MANATEE | 4663 | 9550 | 18712 | 22502 | 26098 | 34704 | 69168 | 97115 | 148442 | 211707 | 9084 | 96 | 1944 |
| SARASOTA | | | | 12440 | 16106 | 28827 | 76895 | 120413 | 202251 | 277776 | 6517 | 98 | 1944 |
| CHARLOTTE | | | | 4013 | 3663 | 4286 | 12594 | 27559 | 59115 | 110975 | 6554 | 94 | 1960 |
| LEE | 3071 | 6294 | 9540 | 14990 | 17488 | 23404 | 54539 | 105216 | 205266 | 335113 | 28382 | 92 | 1960 |
| COLLIER | | | | 2883 | 5102 | 6488 | 15753 | 38040 | 85791 | 152099 | 8198 | 95 | 1960 |
| FL WEST COAST | 97666 | 158125 | 220840 | 365977 | 448181 | 636800 | 1185115 | 1652499 | 2551331 | 3991668 | 256383 | 95 | |
| FL TOTAL | 528542 | 752619 | 968470 | 1468211 | 1897414 | 2771305 | 4951560 | 6789443 | 9739992 | 12917926 | | | |

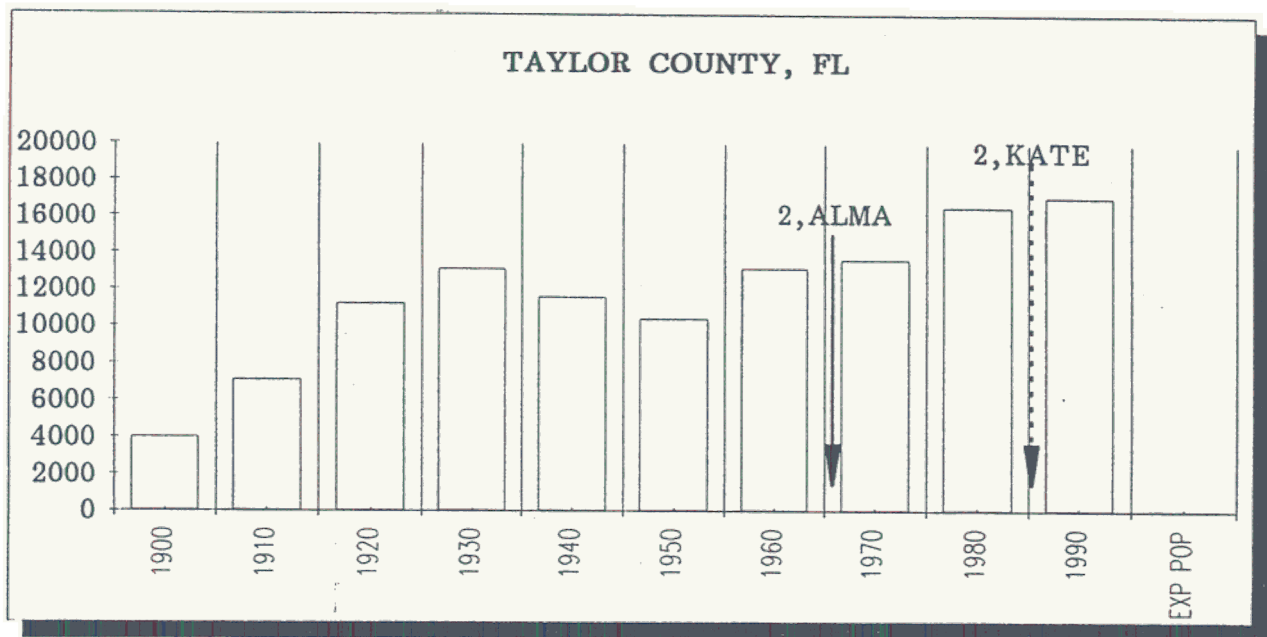
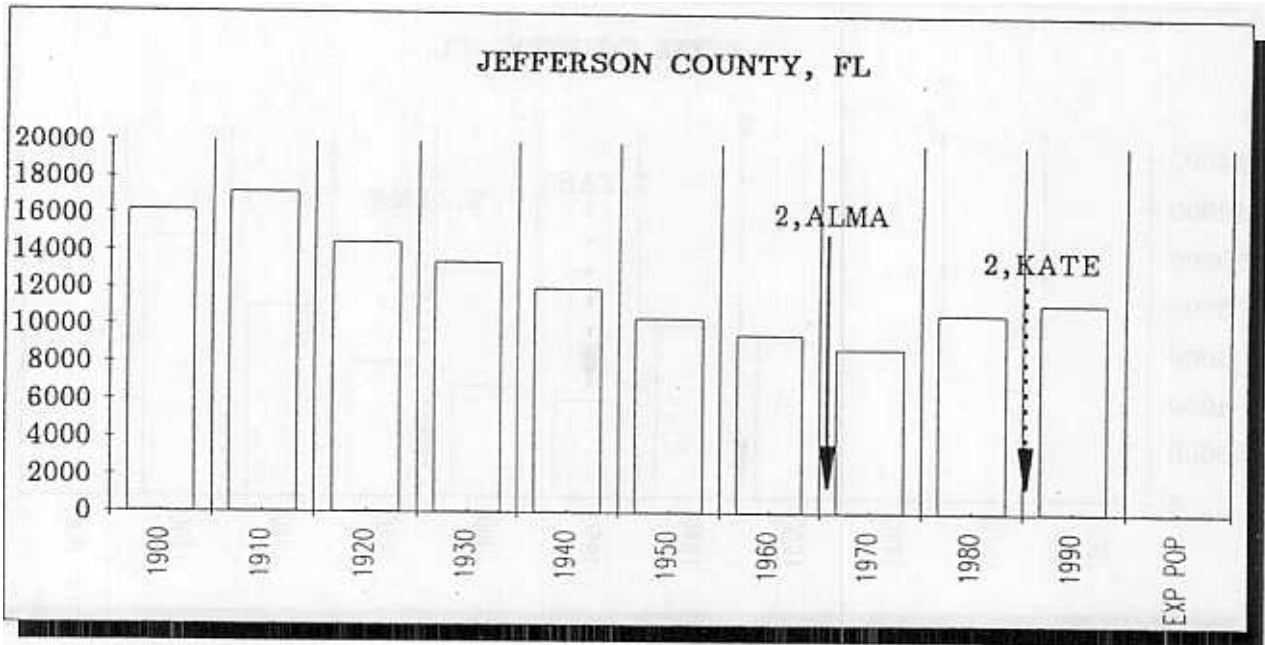


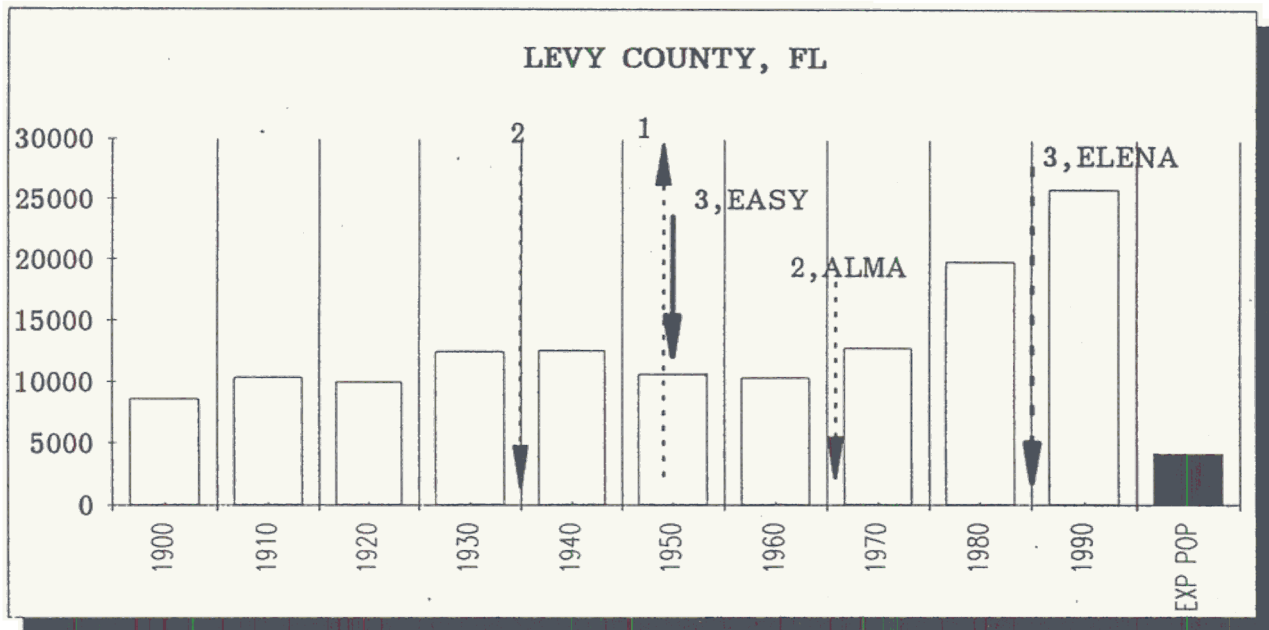
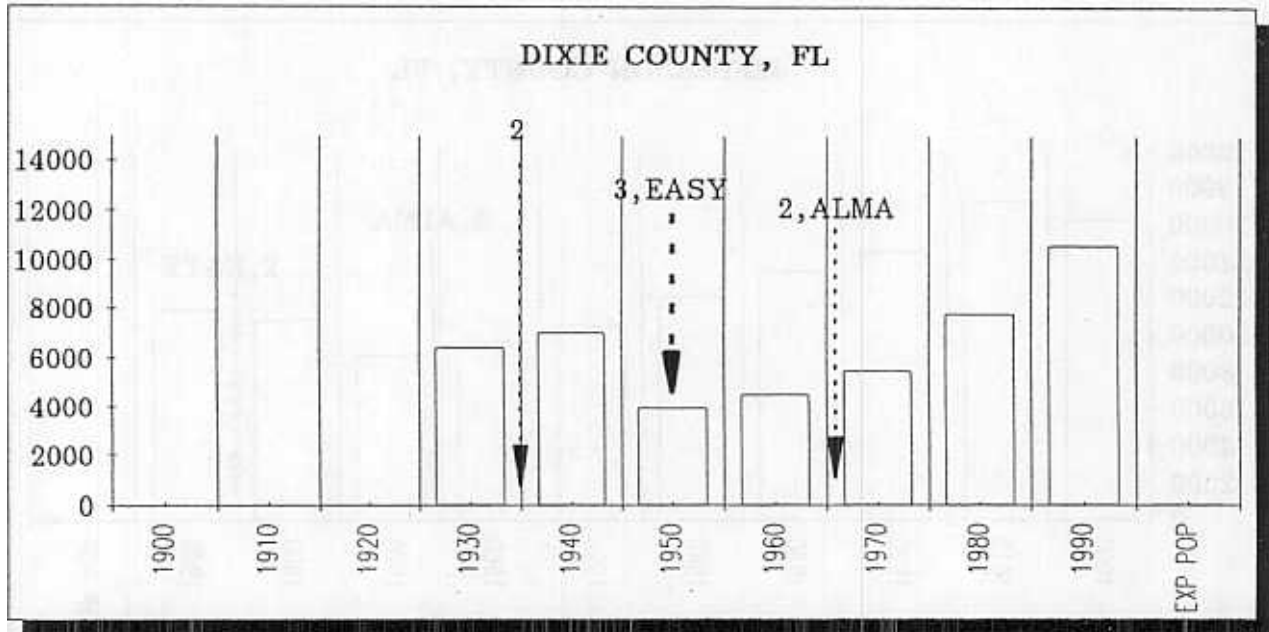


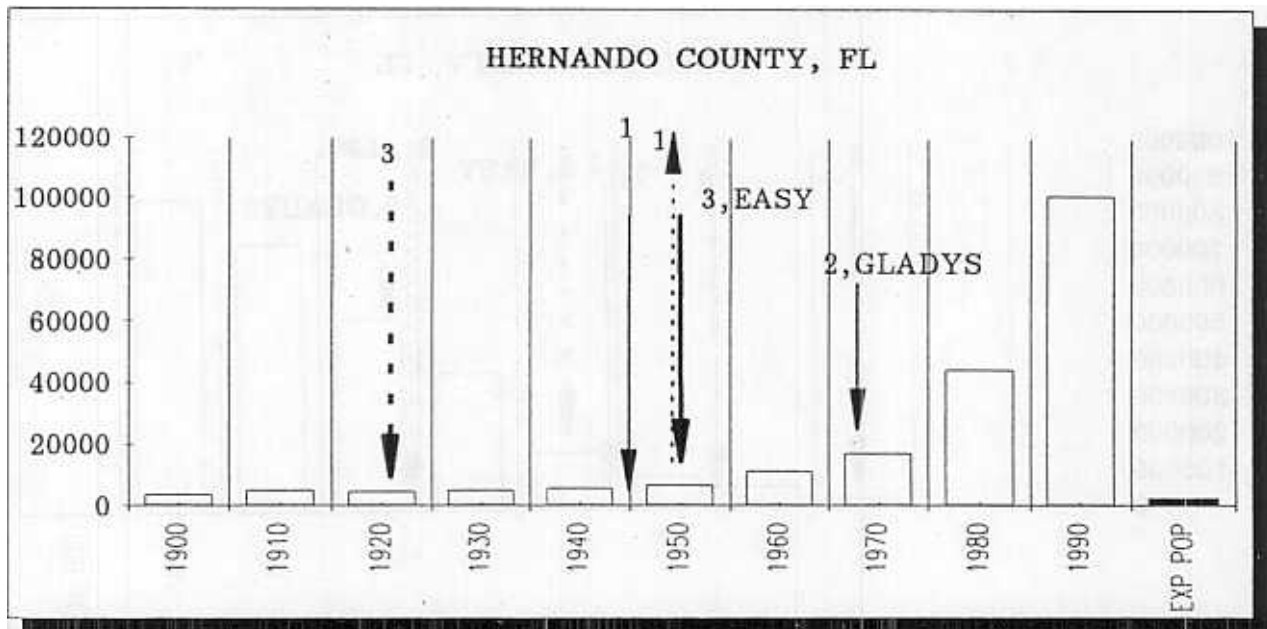
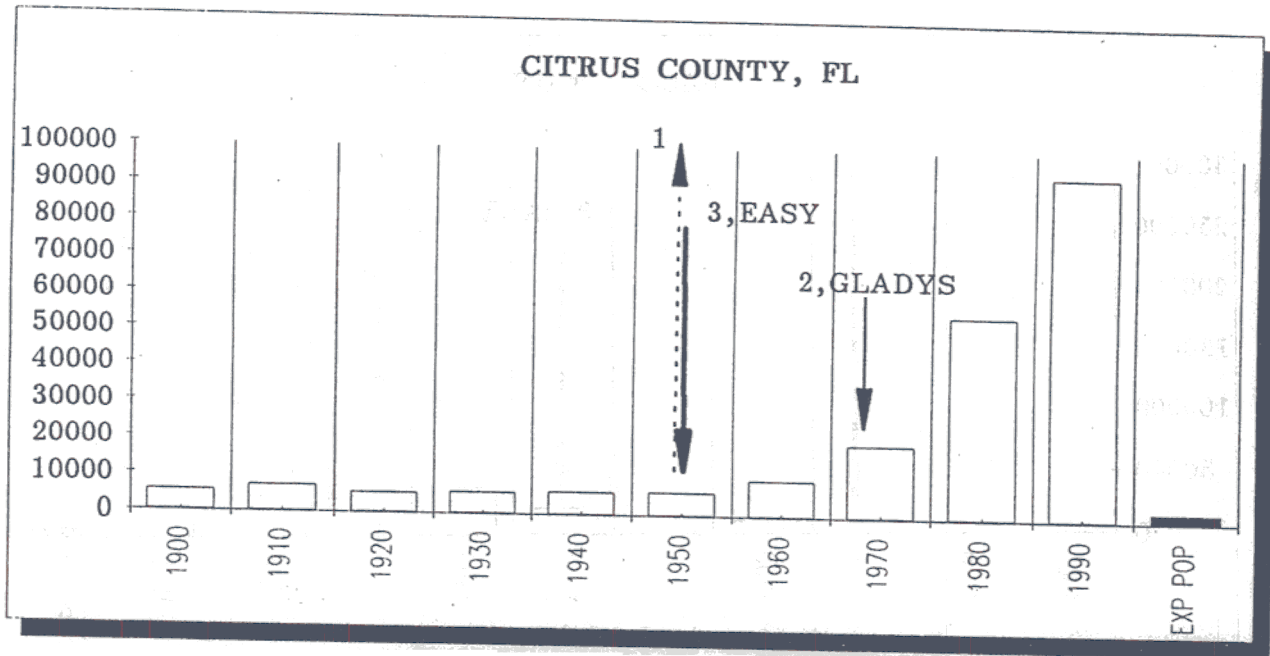


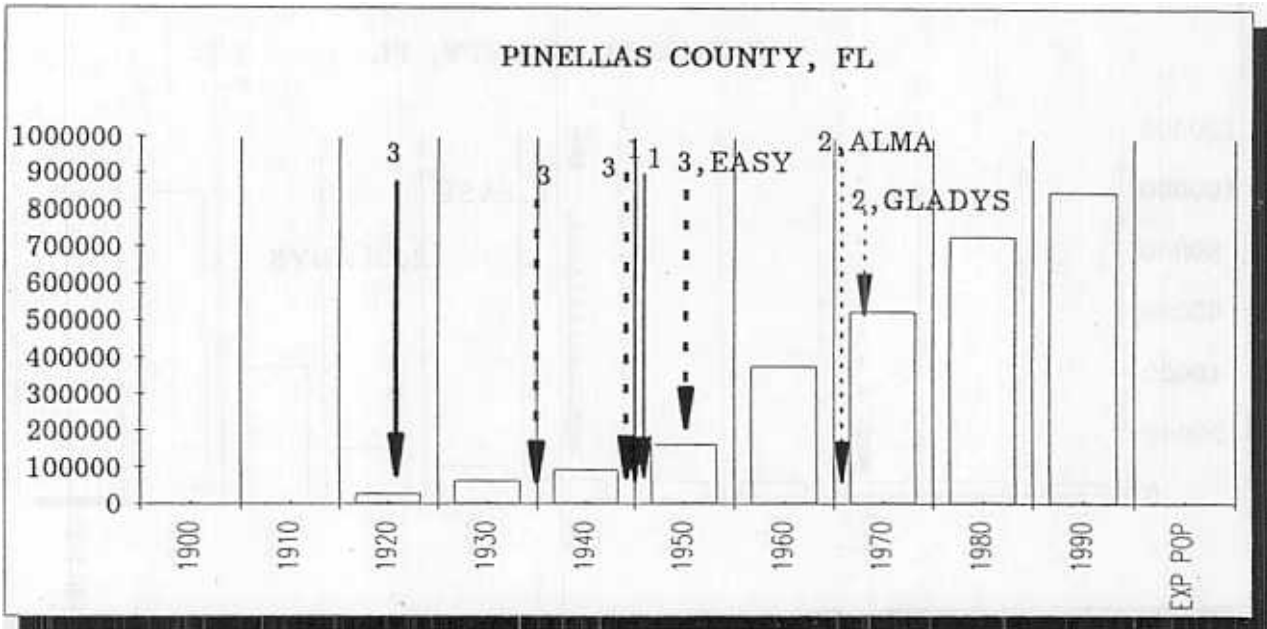
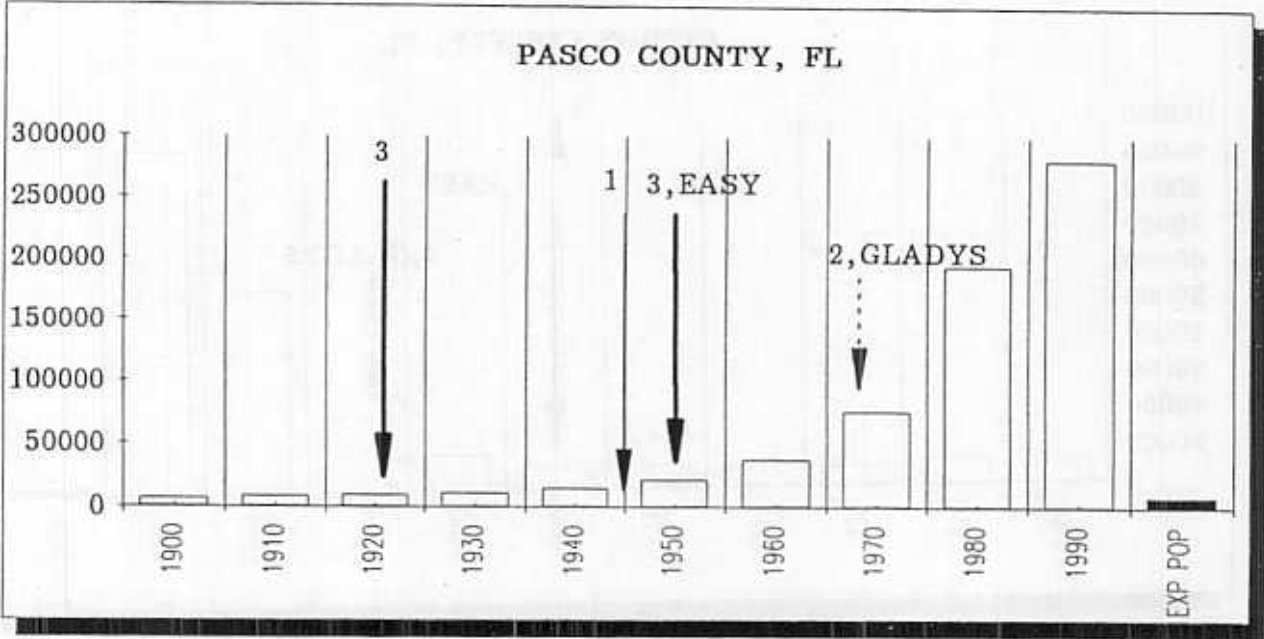


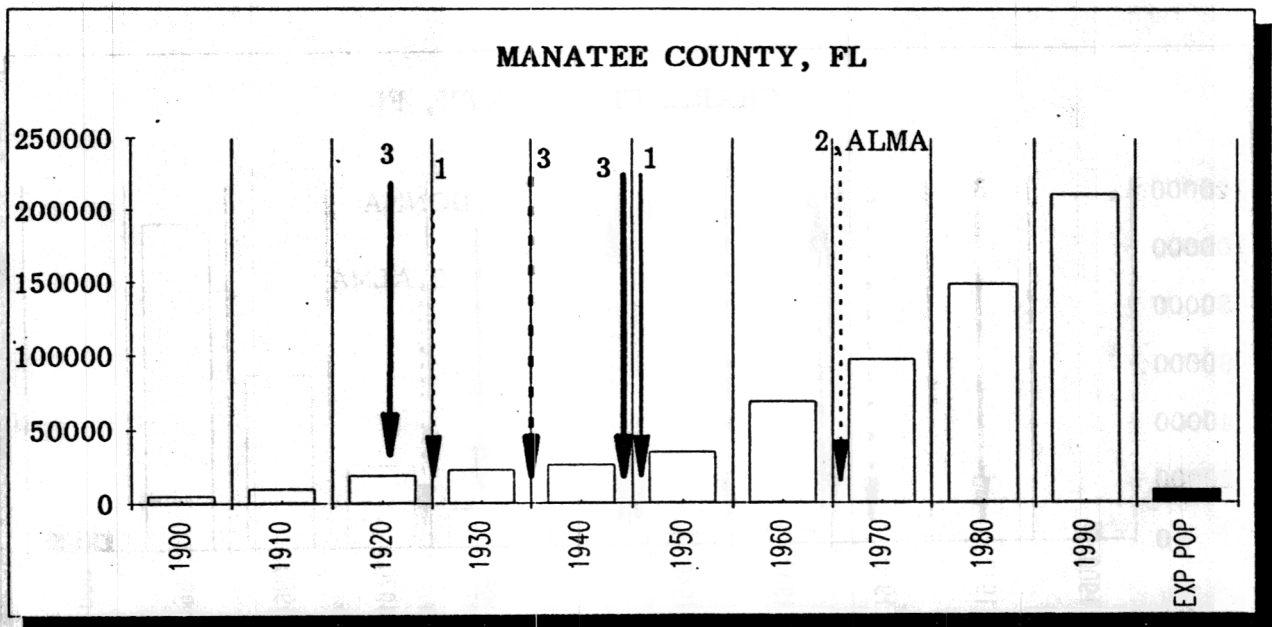
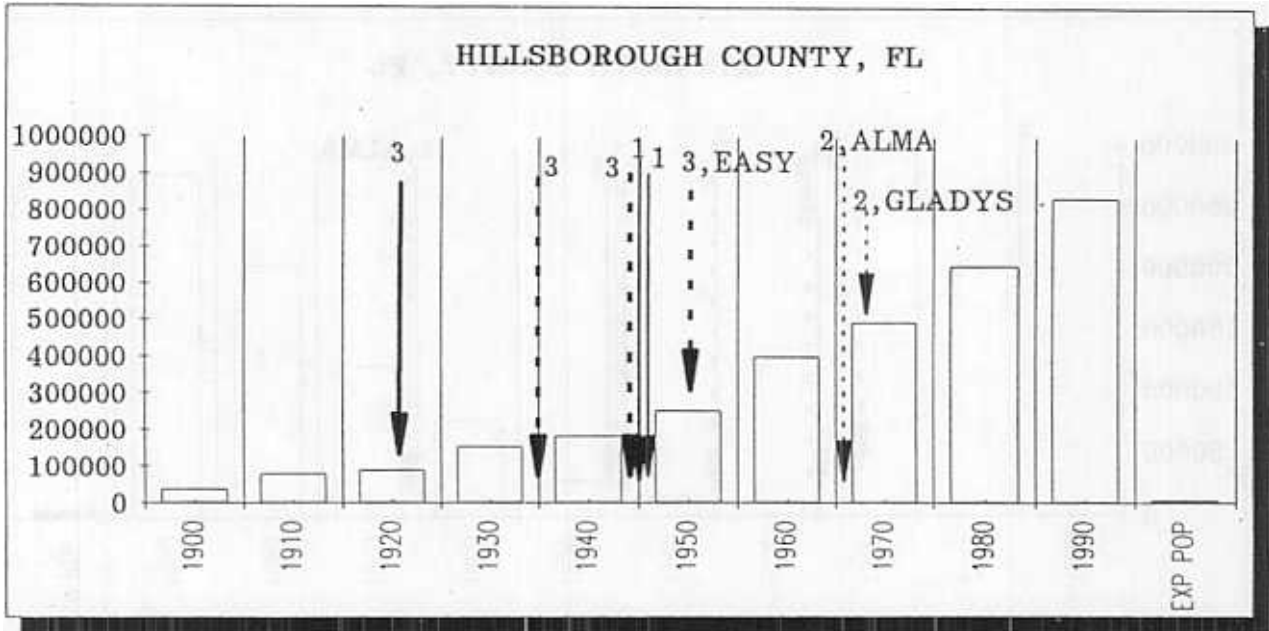


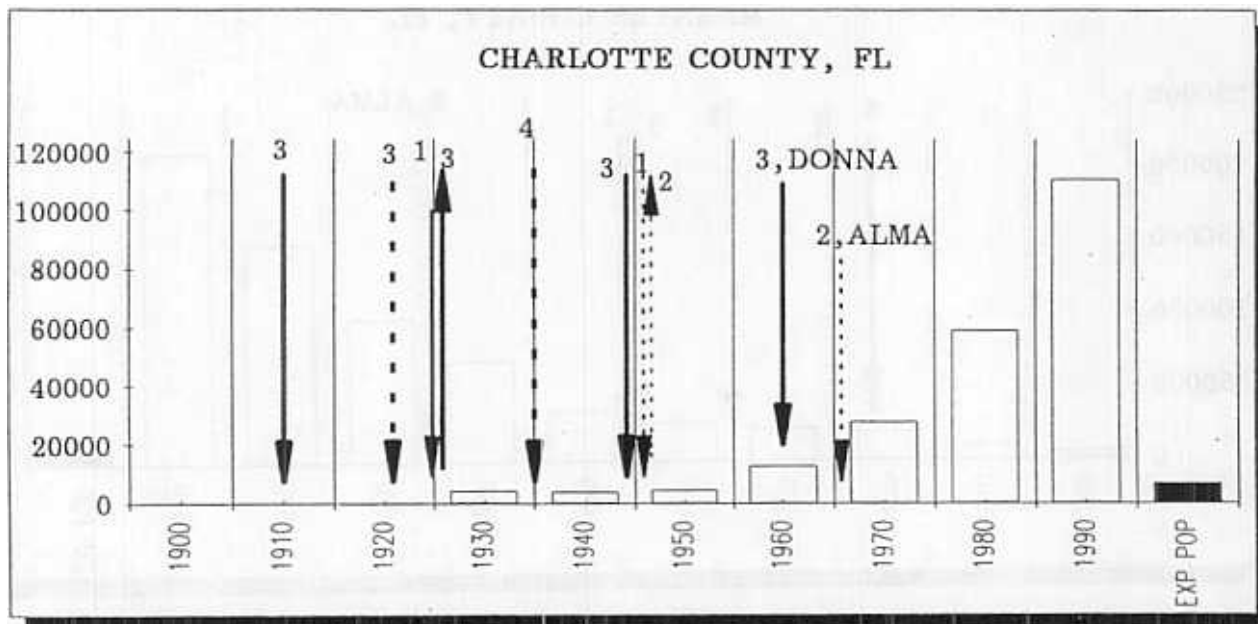
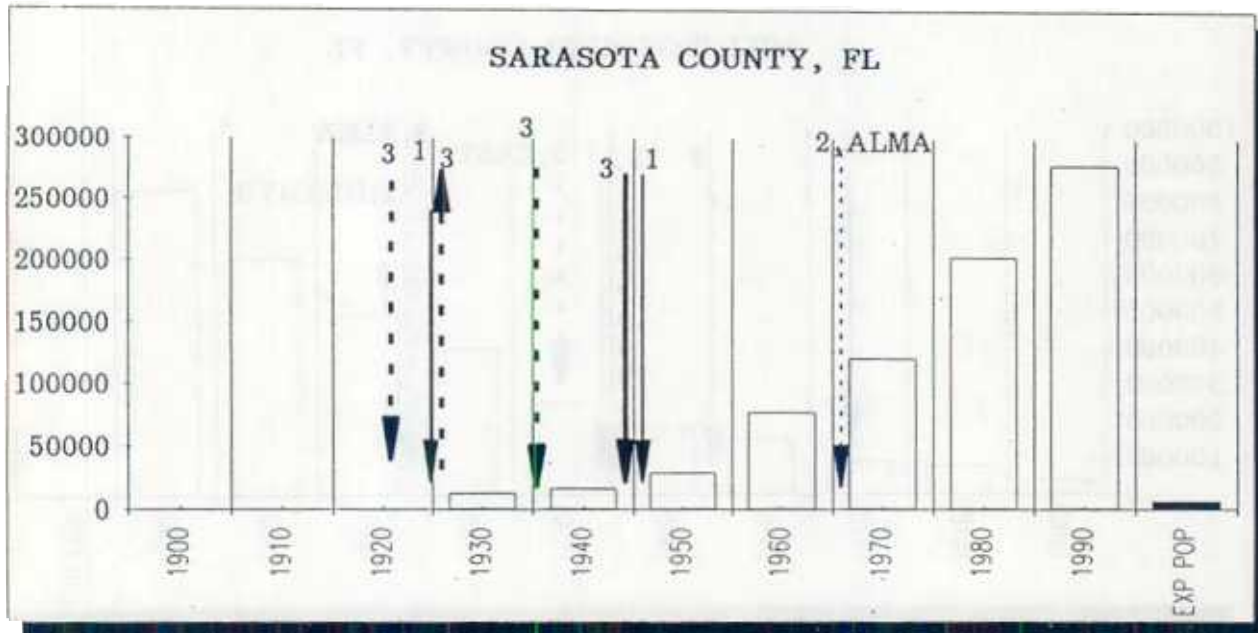


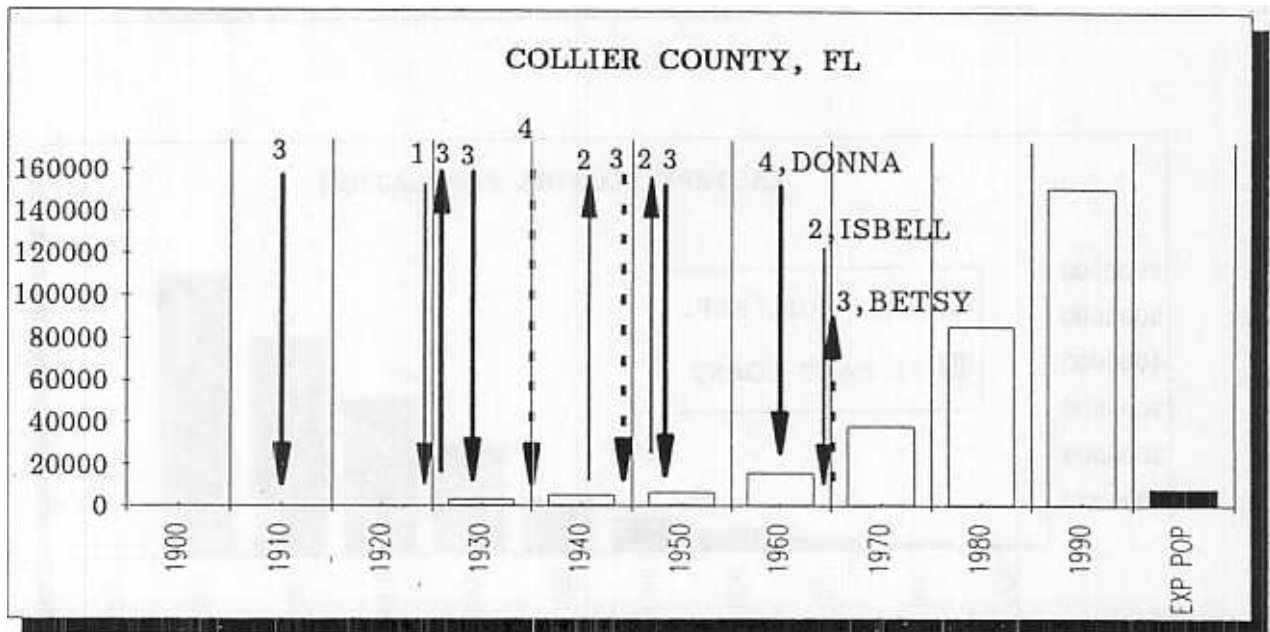
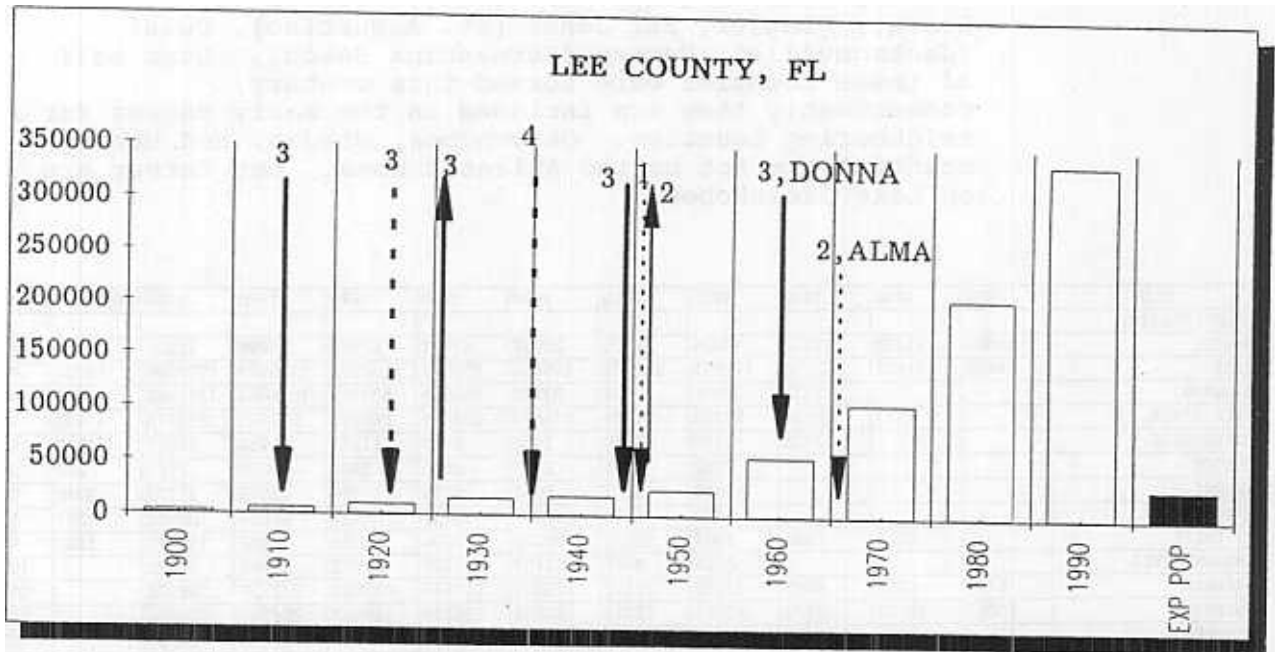






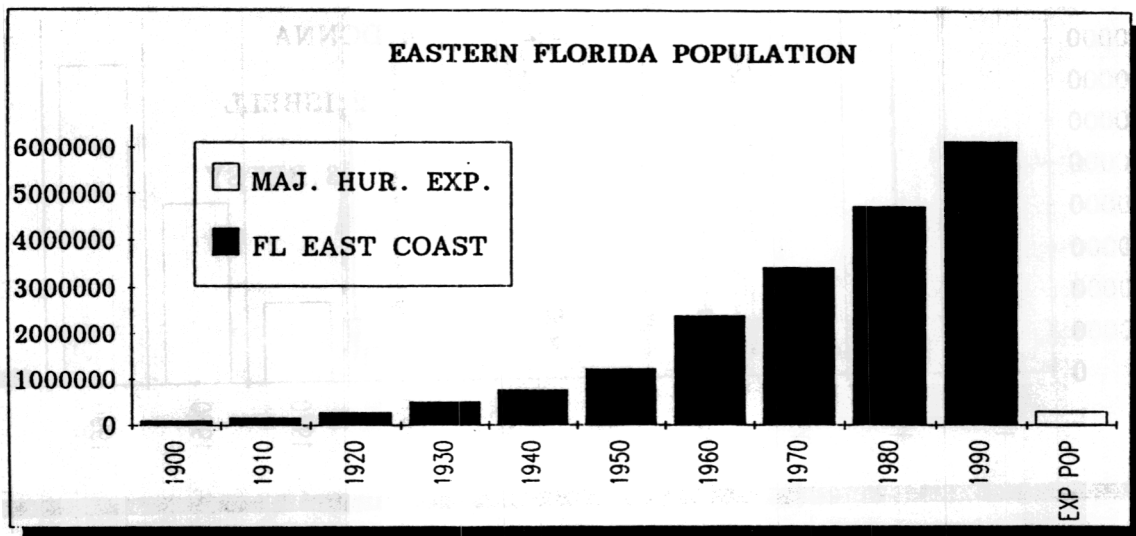


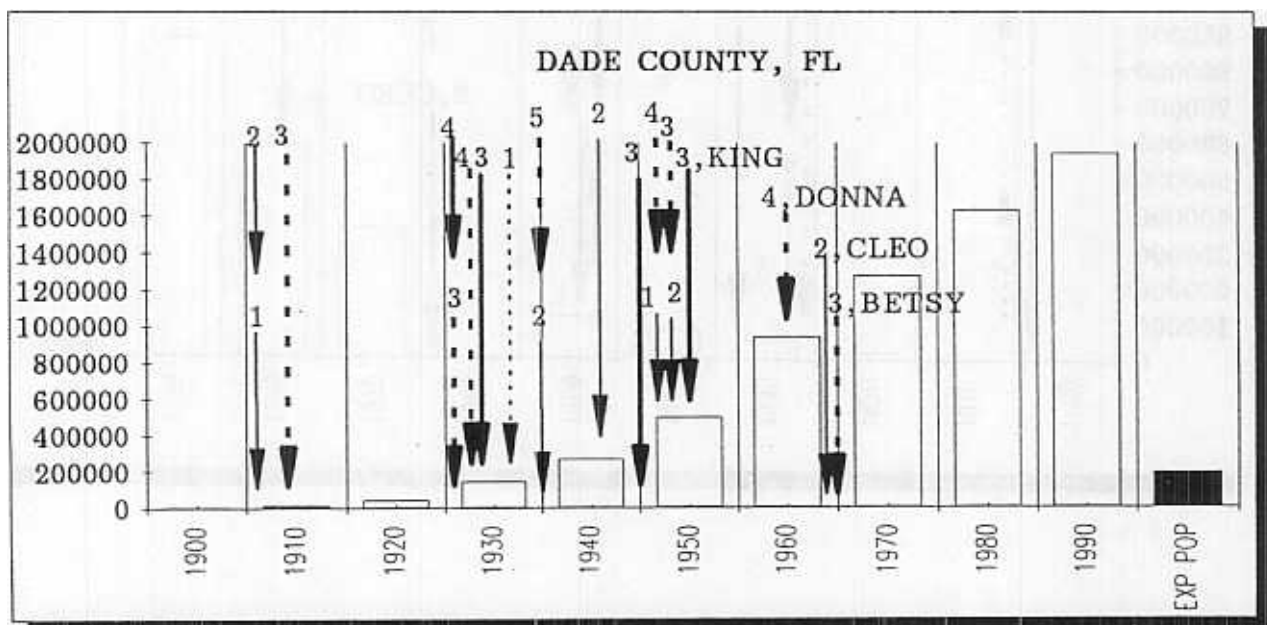
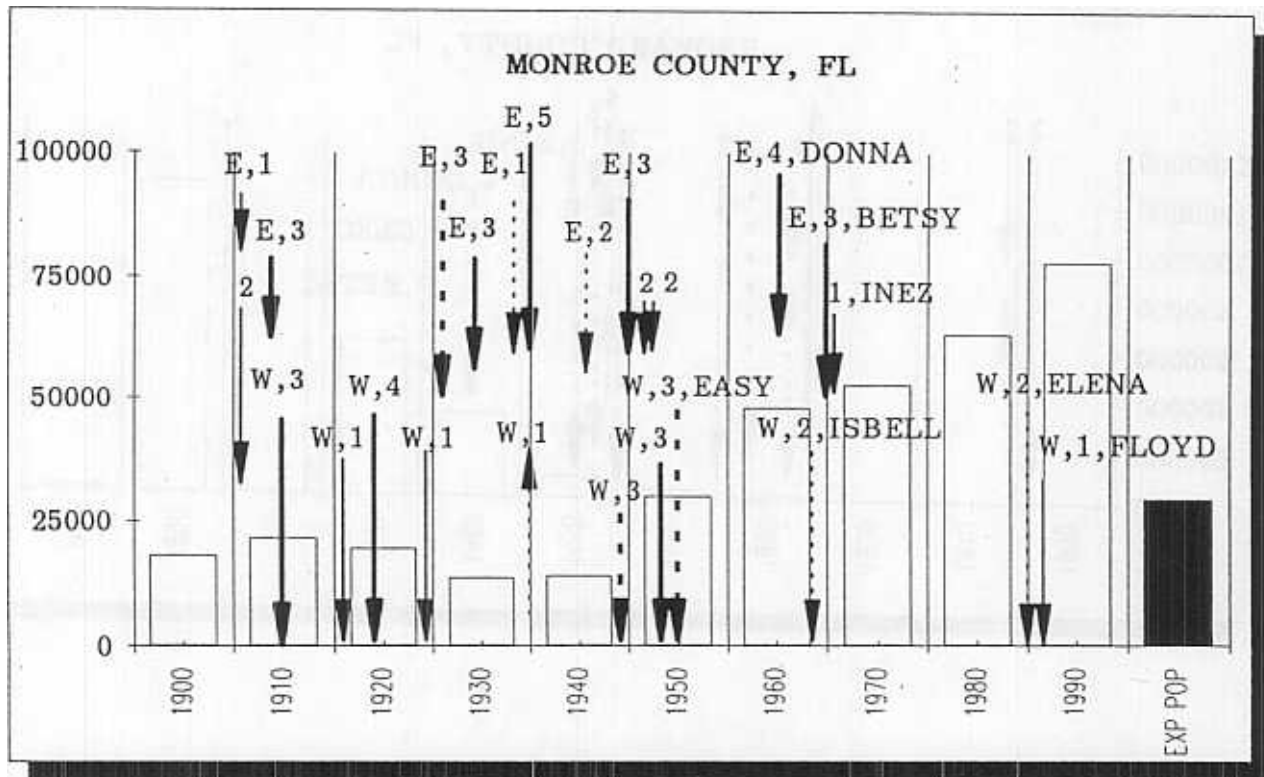


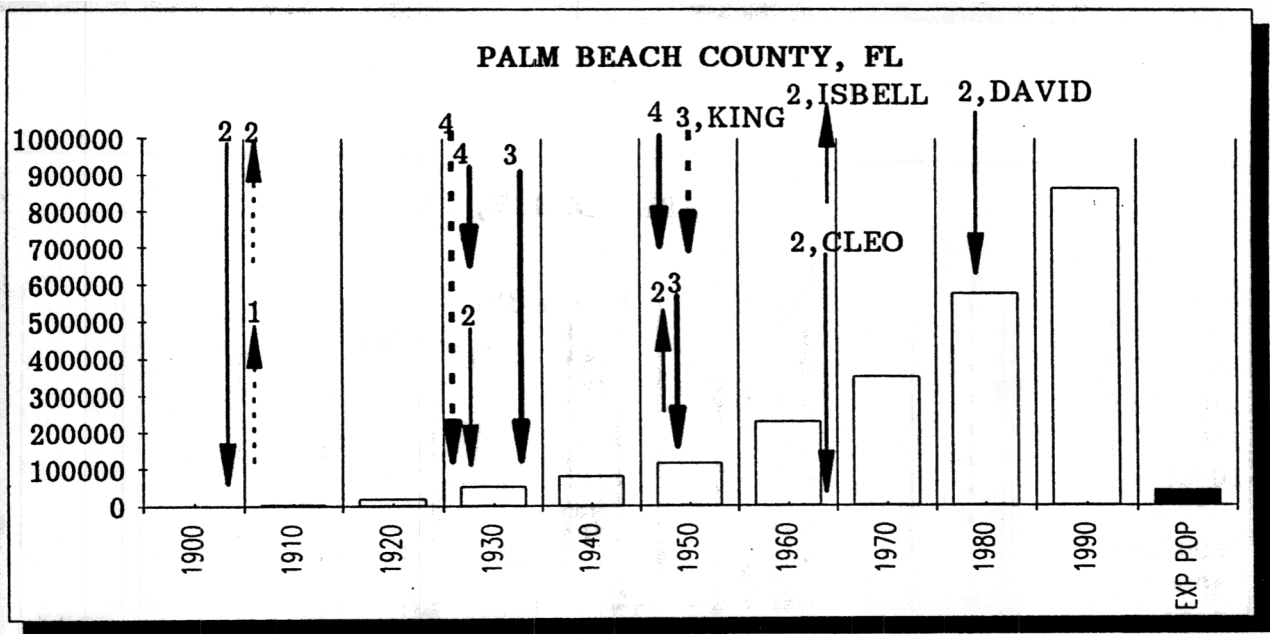
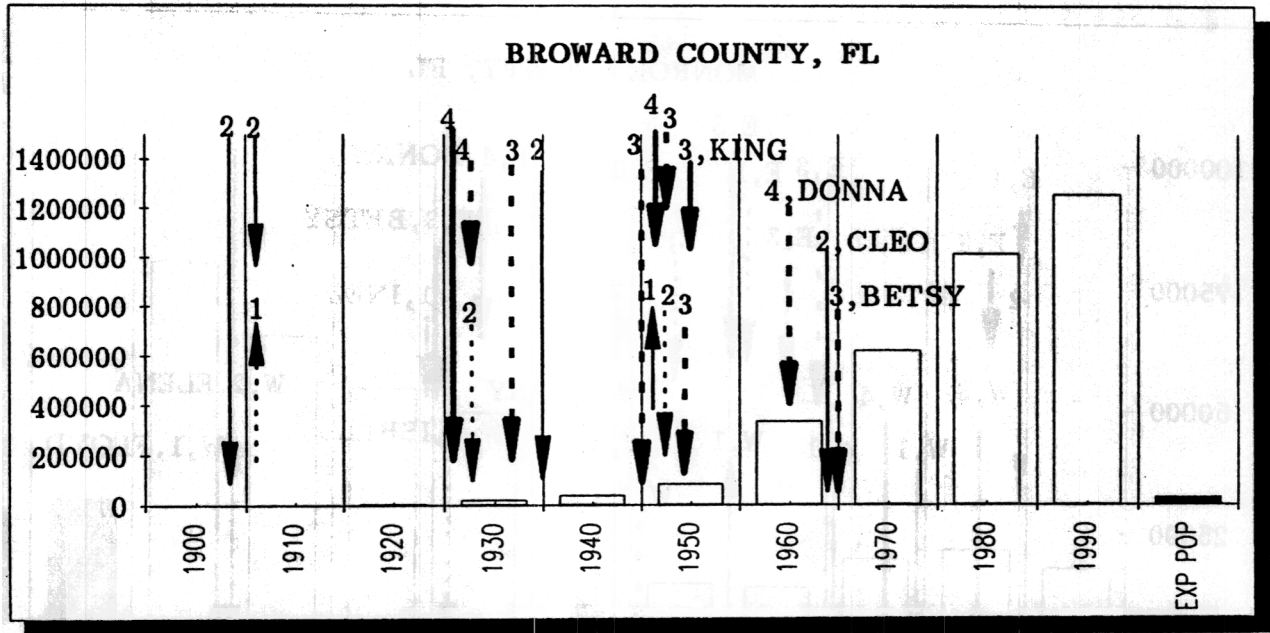


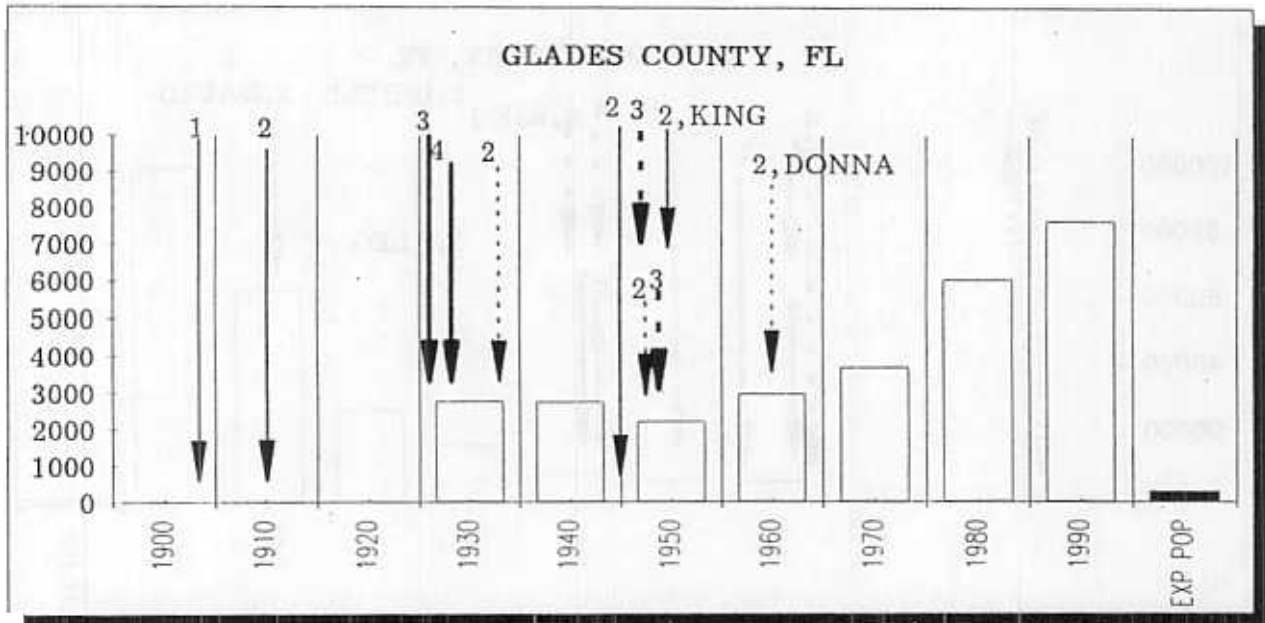
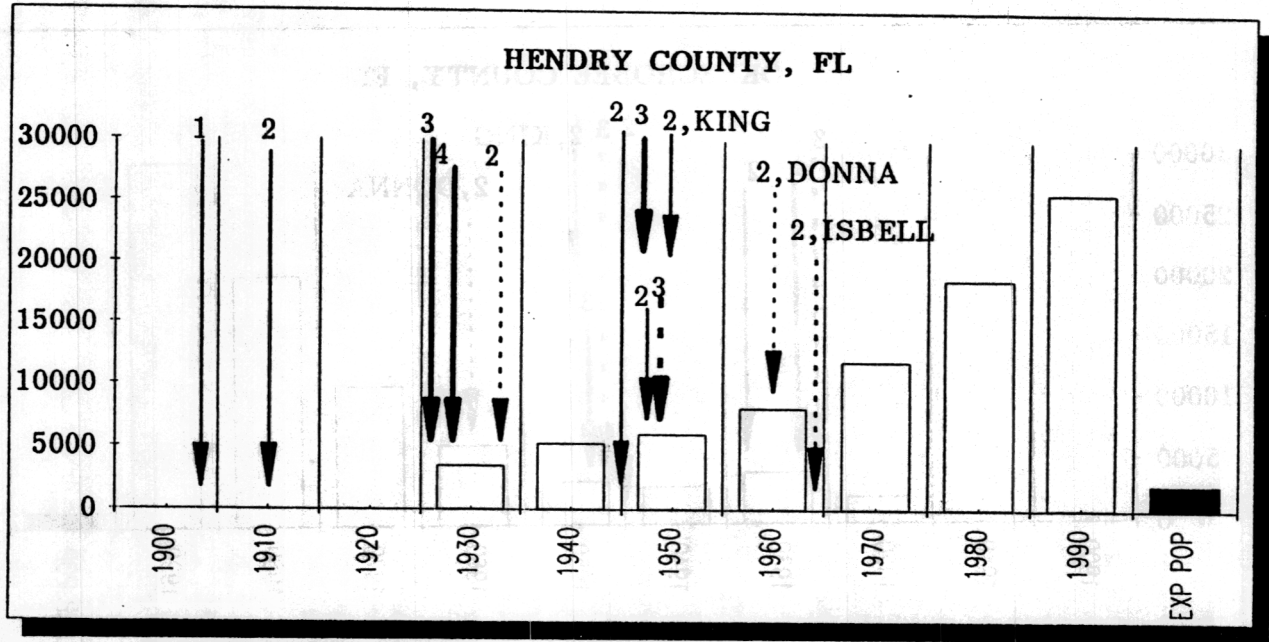
5. FLORIDA East Coast (Monroe through Nassau) (16)
 Monroe (Key West), Dade (Miami), Broward (Fort Lauderdale), Palm Beach (West Palm Beach), Hendry (Clewiston), Glades (Moore Haven), Okeechobee, Martin (Stuart), St. Lucie (Fort Pierce), Indian River (Vero Beach), Brevard (Cape Canaveral), Volusia (Daytona Beach), Flagler, St. Johns (St. Augustine), Duval (Jacksonville), Nassau (Fernandina Beach). Over half of these counties were formed this century, consequently they are included in the early census for neighboring counties. Okeechobee, Glades, and Hendry counties are not on the Atlantic coast, but rather are on Lake Okeechobee.

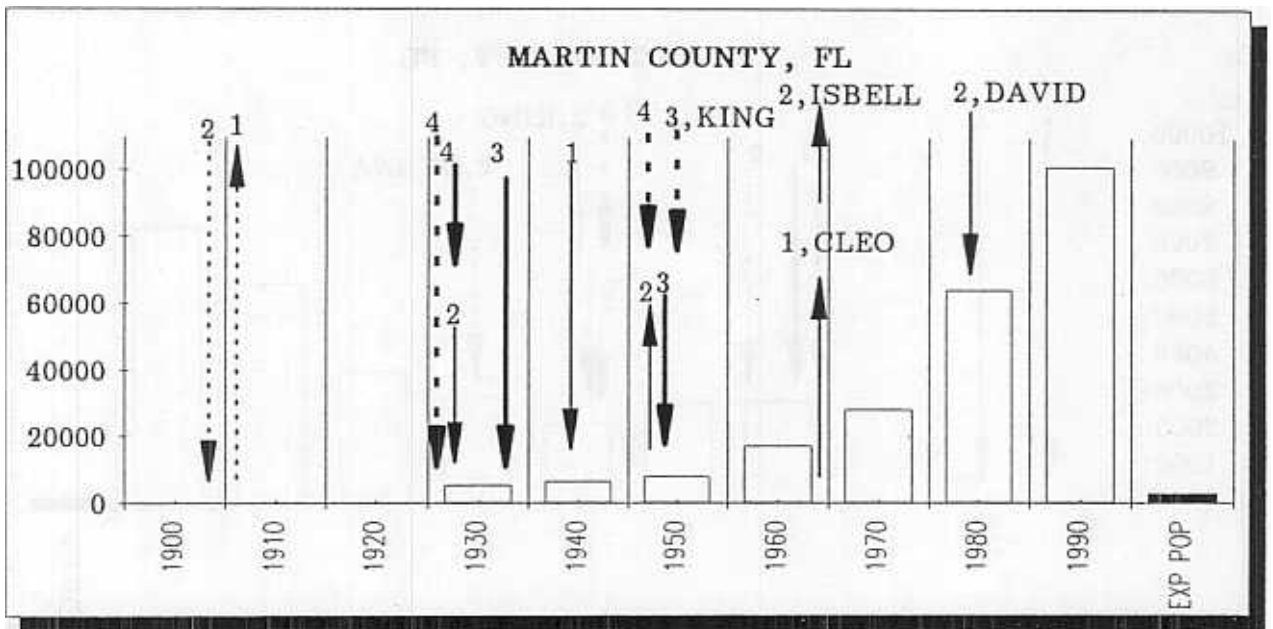
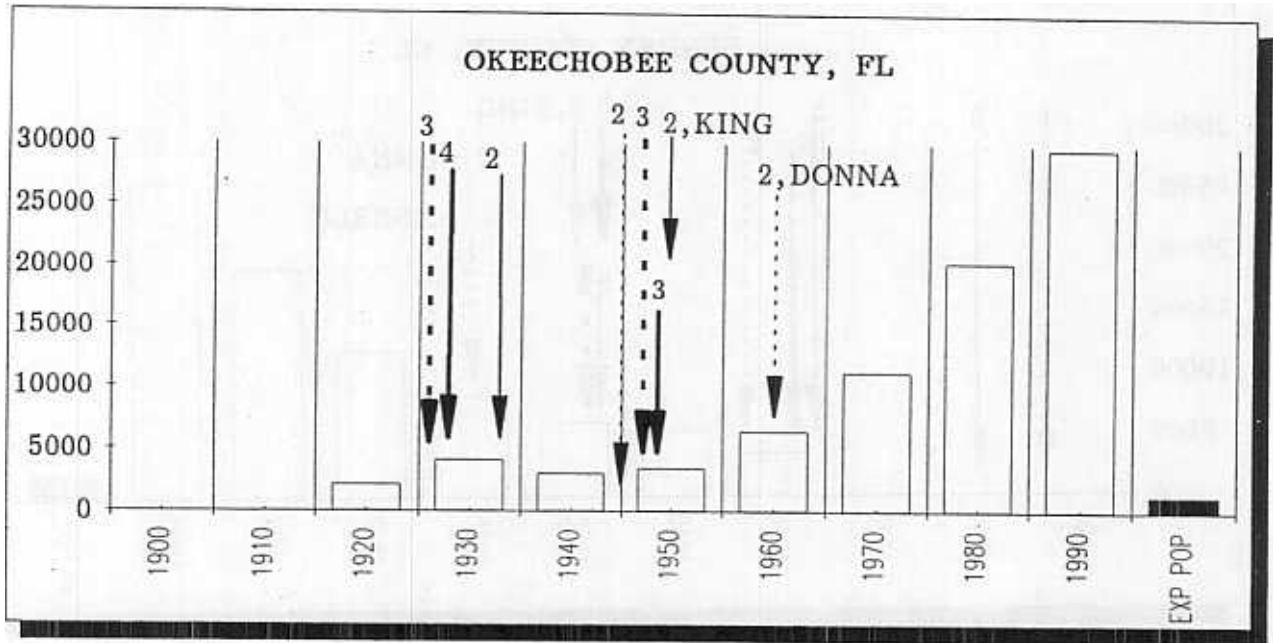
| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|---------------|--------|--------|--------|---------|---------|---------|---------|---------|---------|----------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| MONROE | 18006 | 21563 | 19550 | 13624 | 14078 | 29957 | 47921 | 52586 | 63098 | 78024 | 29609 | 62 | 1965 |
| DADE | 4955 | 11933 | 42753 | 142955 | 267739 | 495084 | 935047 | 1267792 | 1625979 | 1937094 | 190904 | 90 | 1950 |
| BROWARD | | | 5135 | 20094 | 39794 | 83933 | 333946 | 620100 | 1014043 | 1255488 | 32365 | 97 | 1950 |
| PALM BEACH | | 5577 | 18654 | 51781 | 79989 | 114688 | 228106 | 348993 | 573125 | 863518 | 41418 | 95 | 1949 |
| OKEECHOBEE | | | 2132 | 4129 | 3000 | 3454 | 6424 | 11233 | 20264 | 29627 | 1269 | 96 | 1949 |
| GLADES | | | | 2762 | 2745 | 2199 | 2950 | 3669 | 5992 | 7591 | 272 | 96 | 1928 |
| HENDRY | | | | 3492 | 5237 | 6051 | 8119 | 11859 | 18599 | 25773 | 2010 | 92 | 1947 |
| MARTIN | | | | 5111 | 6295 | 7807 | 16932 | 28035 | 64014 | 100900 | 2851 | 97 | 1949 |
| ST LUCIE | | 4075 | 7886 | 7057 | 18871 | 20180 | 39294 | 50836 | 87182 | 150171 | 1857 | 99 | 1933 |
| INDIAN RIVER | | | | 6724 | 8957 | 11782 | 25309 | 35992 | 59896 | 90208 | | 100 | |
| BREVARD | 5158 | 4717 | 8505 | 13283 | 16142 | 23653 | 111435 | 230006 | 272959 | 398978 | | 100 | |
| VOLUSIA | 10003 | 16510 | 23374 | 42757 | 53710 | 74229 | 125319 | 169487 | 258762 | 370712 | | 100 | |
| FLAGLER | | | 2442 | 2466 | 3008 | 3367 | 4566 | 4454 | 10913 | 28701 | | 100 | |
| ST JOHNS | 9165 | 13208 | 13061 | 18676 | 20012 | 24998 | 30034 | 31035 | 51303 | 83829 | | 100 | |
| DUVAL | 39733 | 75163 | 113540 | 155503 | 210143 | 304029 | 455411 | 528865 | 570981 | 672971 | | 100 | |
| NASSAU | 9654 | 10525 | 11340 | 9375 | 10826 | 12811 | 17189 | 20626 | 32894 | 43941 | | 100 | |
| FL EAST COAST | 96674 | 163272 | 268372 | 499789 | 760546 | 1218222 | 2388002 | 3415568 | 4730004 | 6137526 | 287654 | 95 | |
| FL TOTAL | 528542 | 752619 | 968470 | 1468211 | 1897414 | 2771305 | 4951560 | 6789443 | 9739992 | 12937926 | | | |

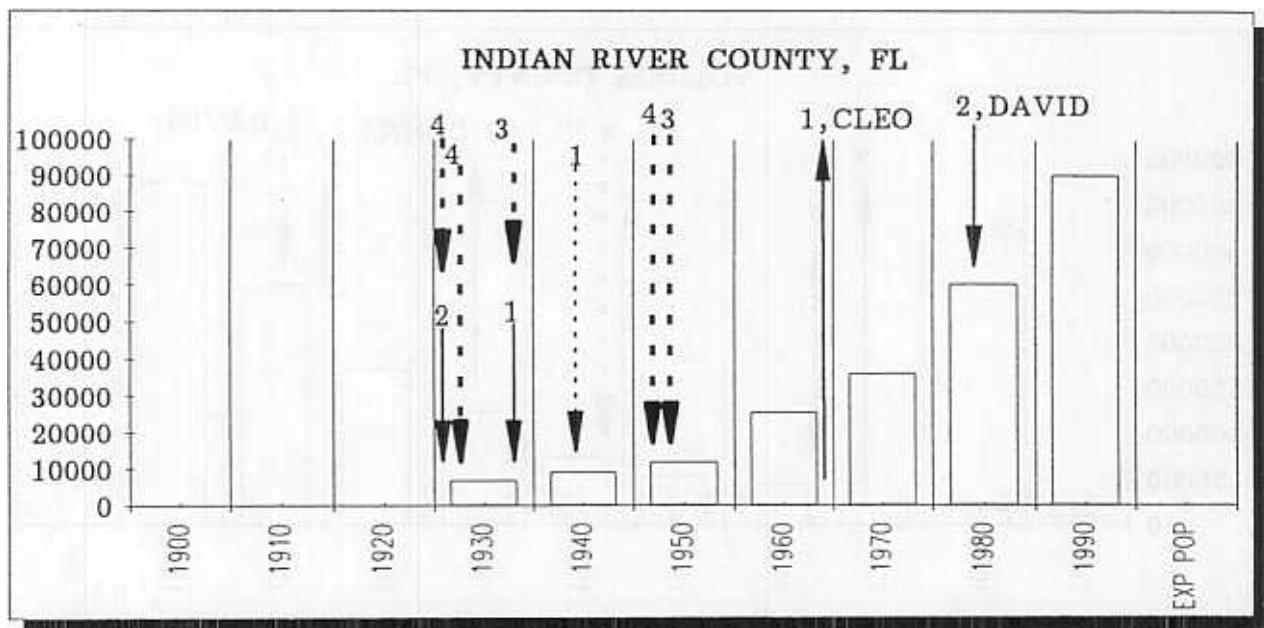
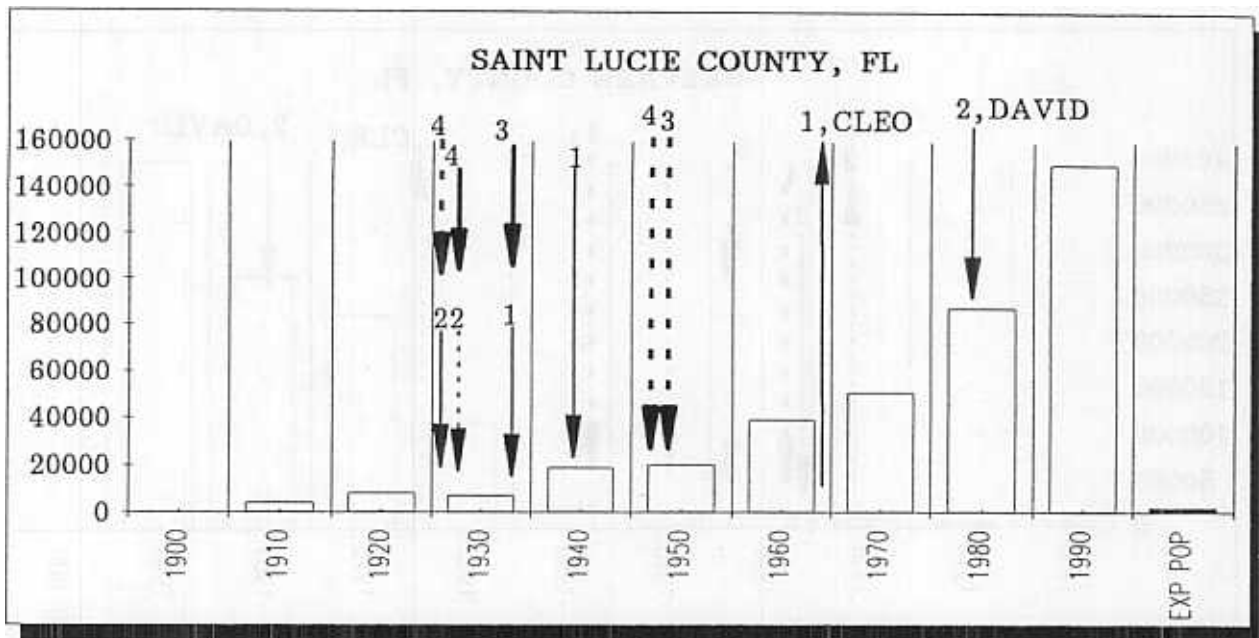


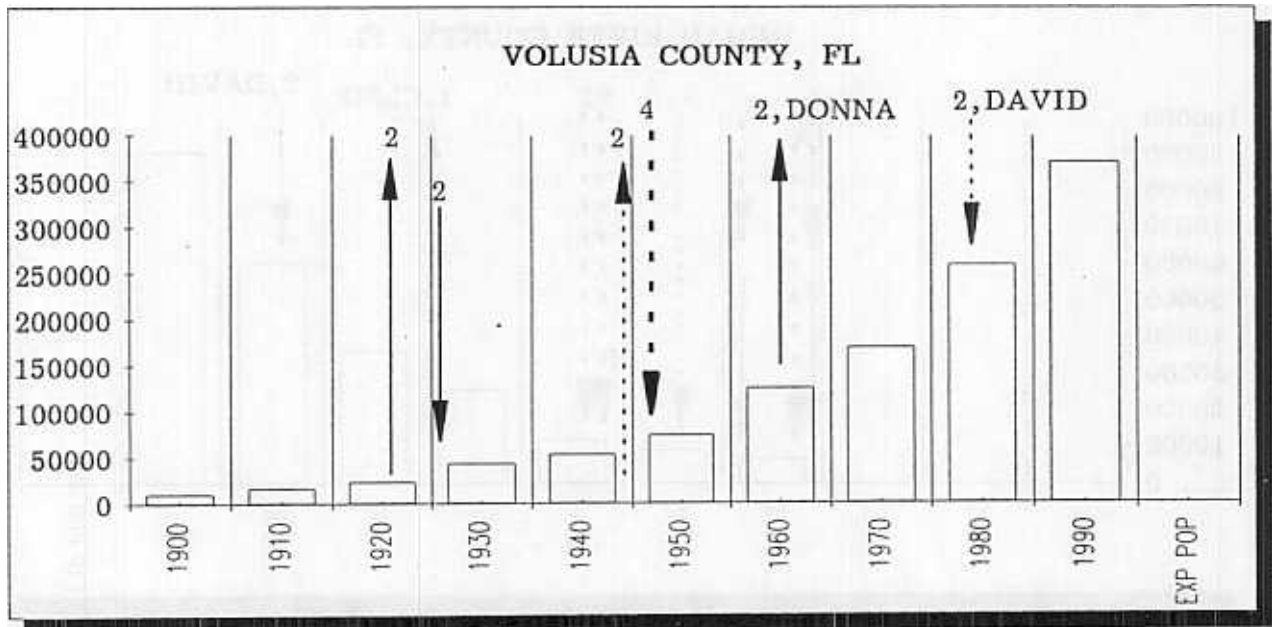
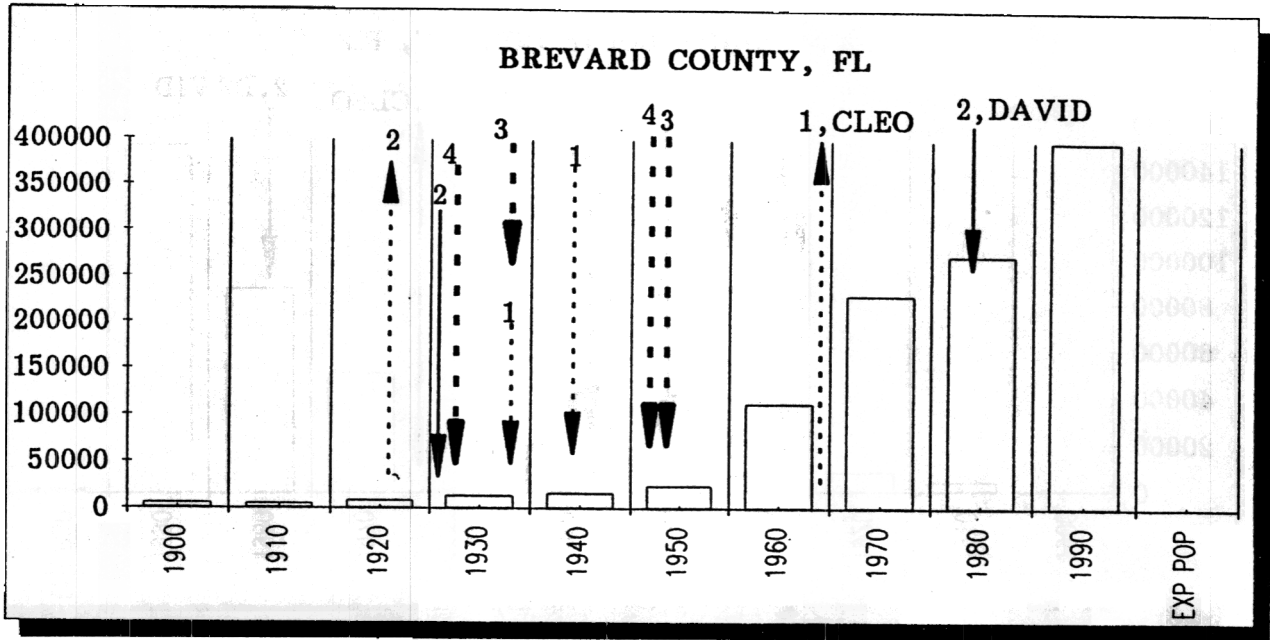


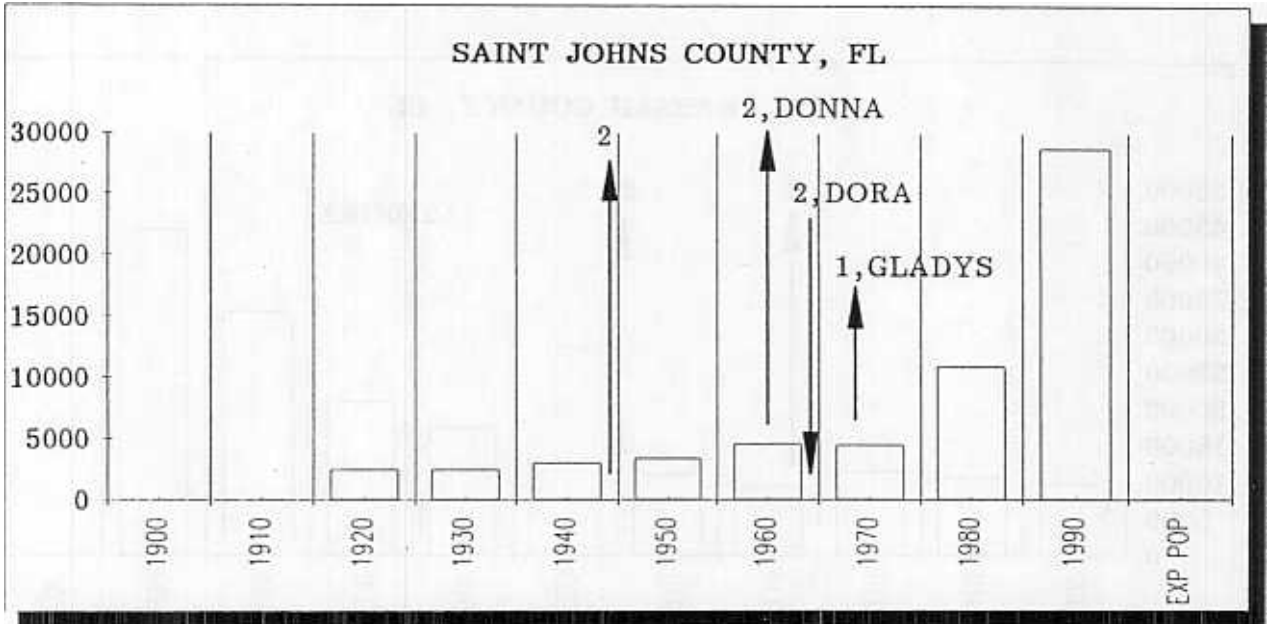
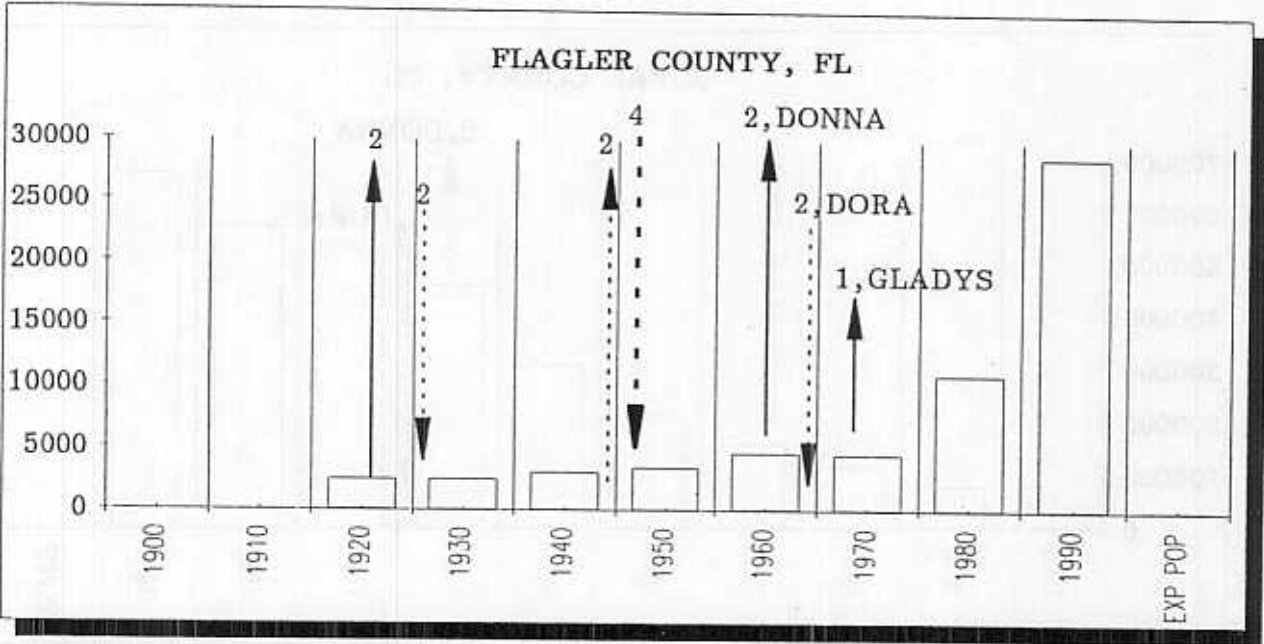


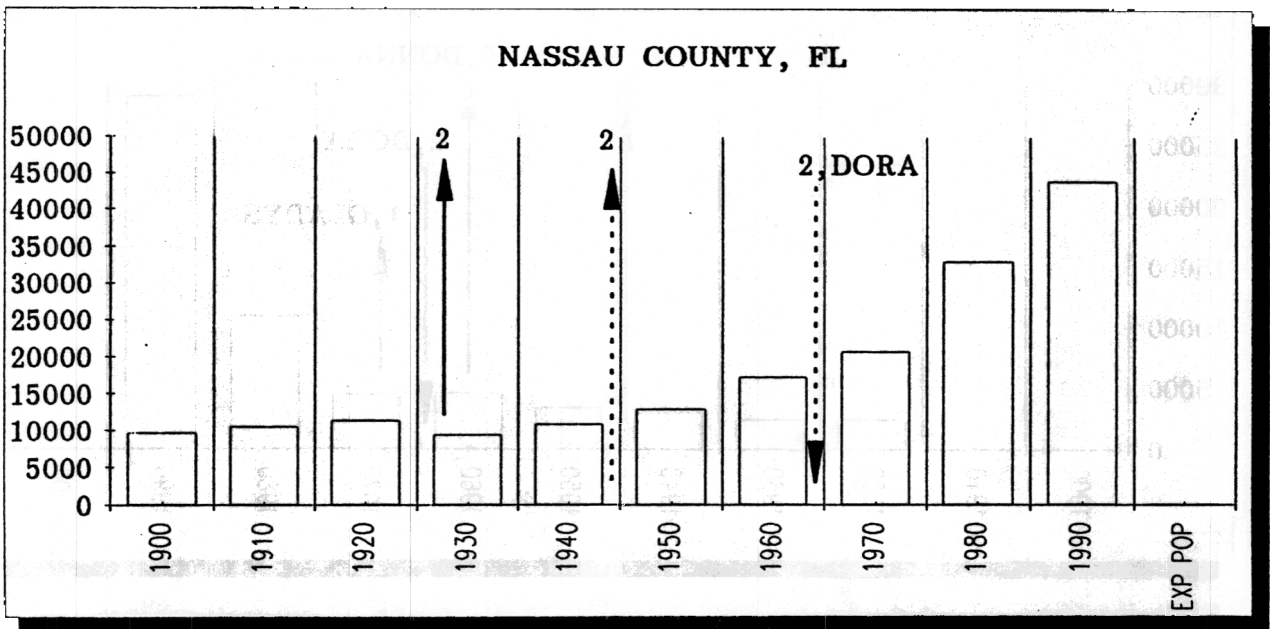
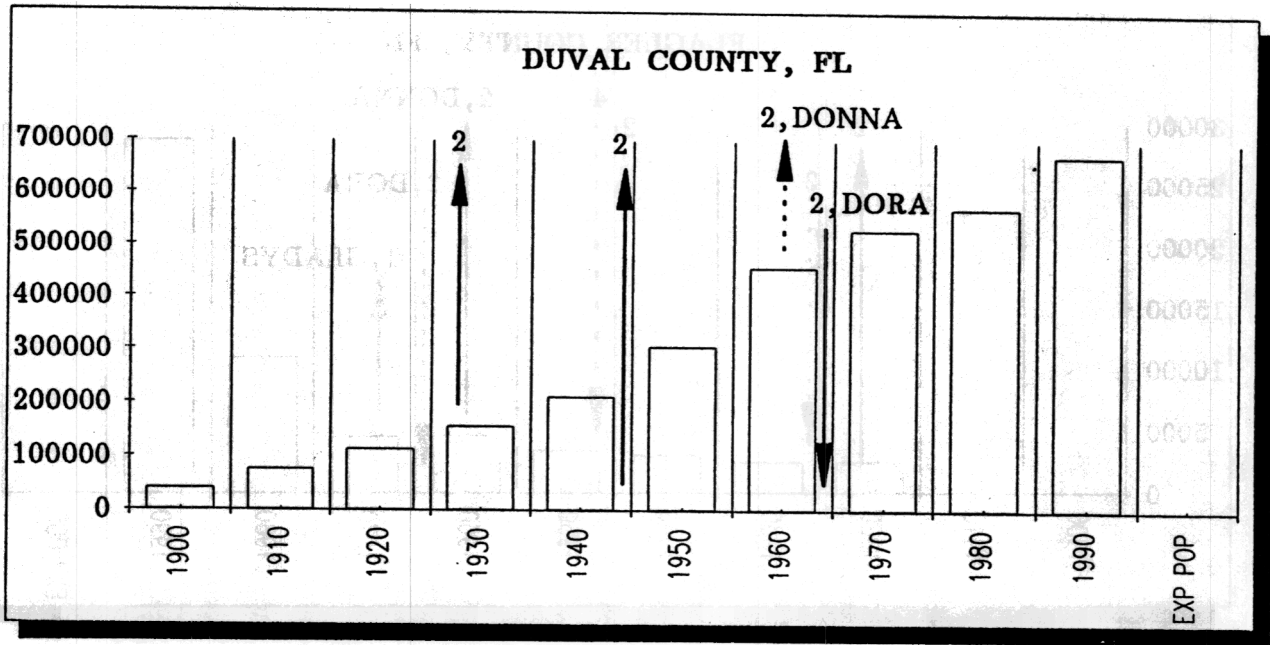








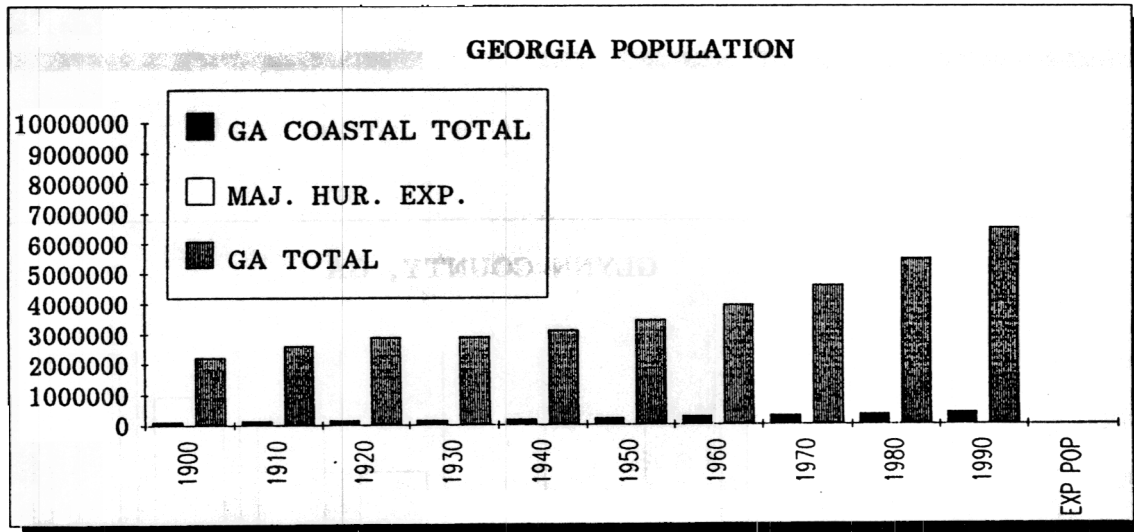


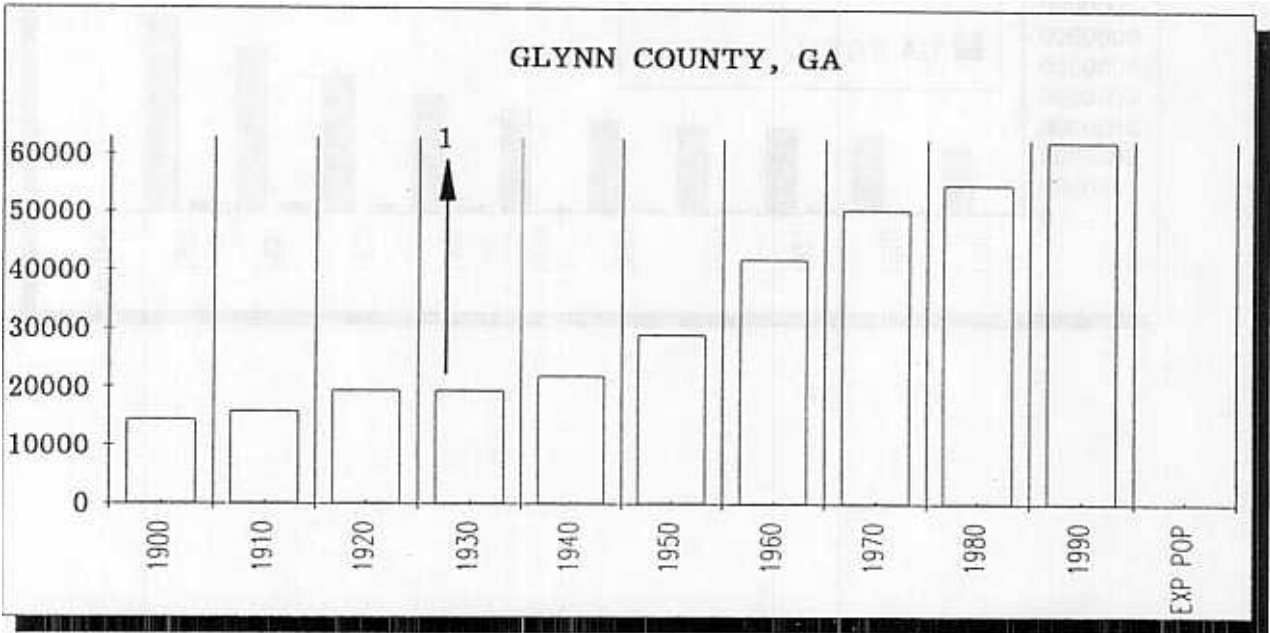
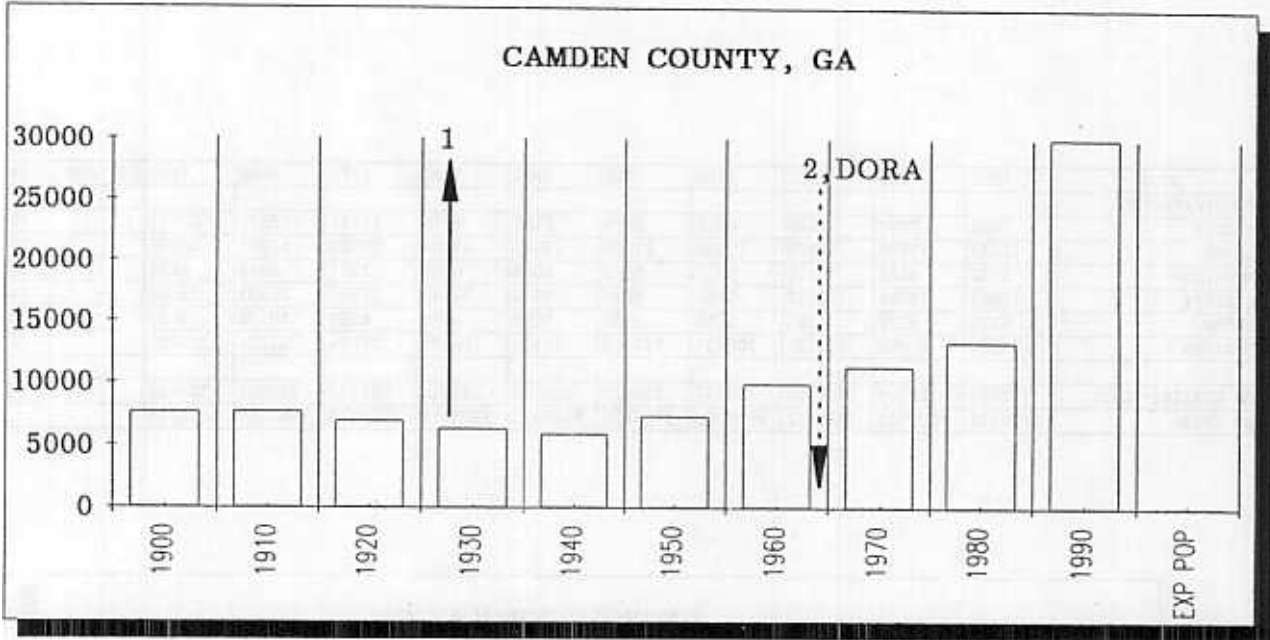


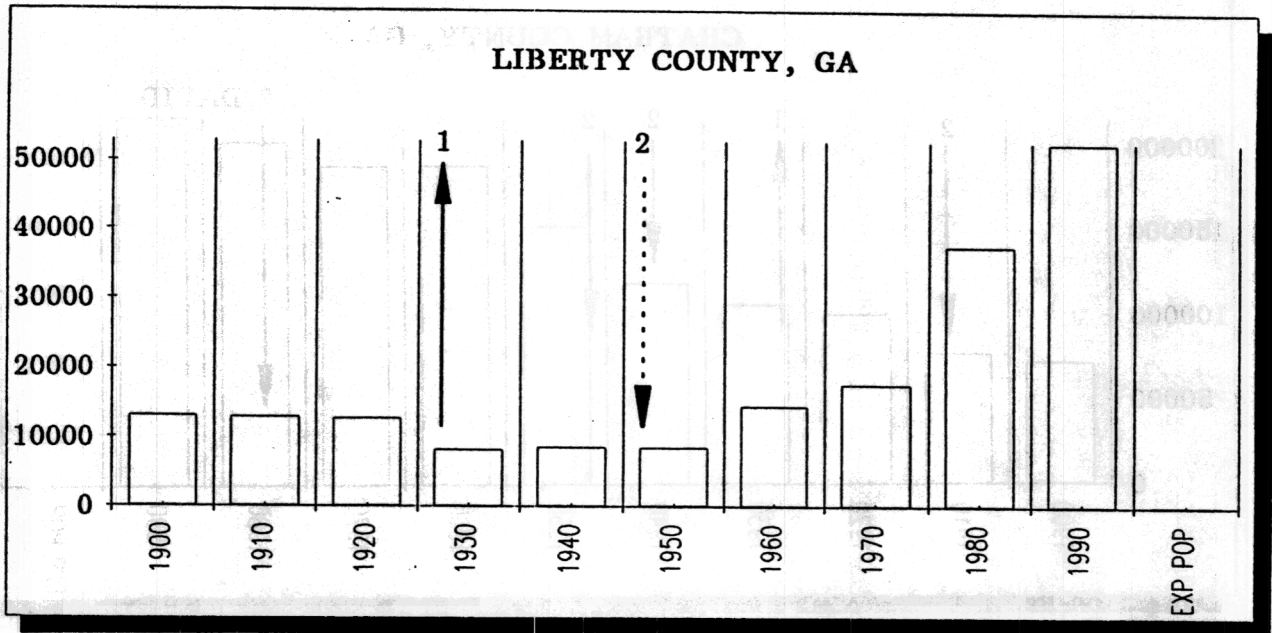
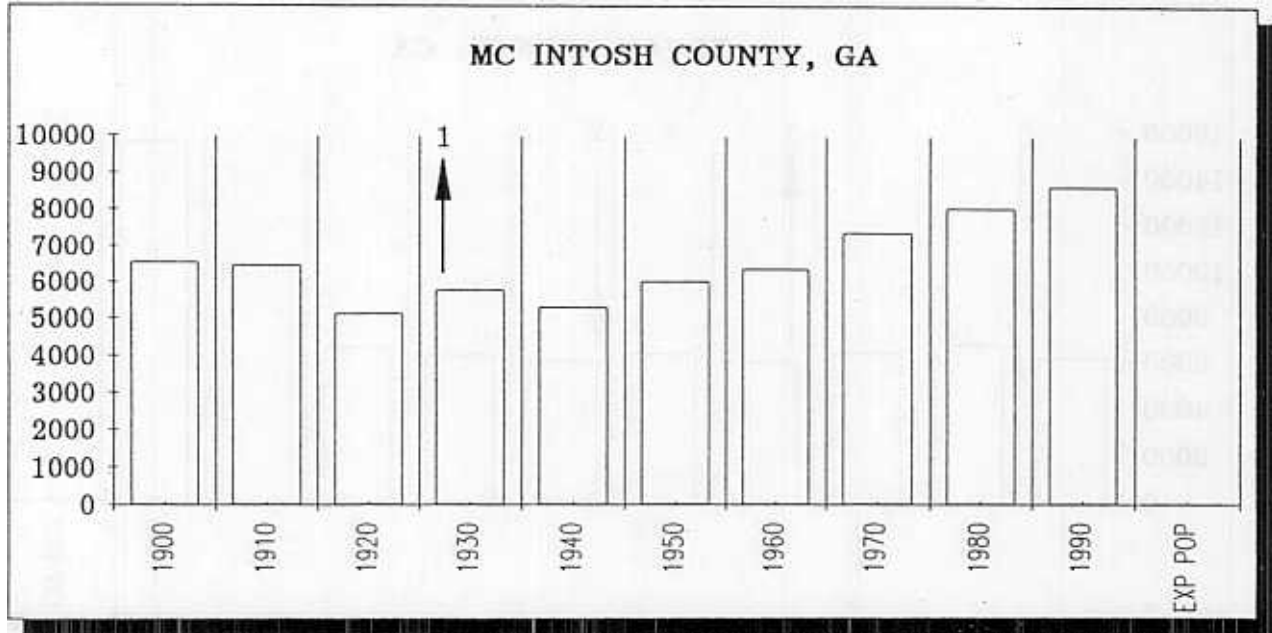
6. GEORGIA (6)

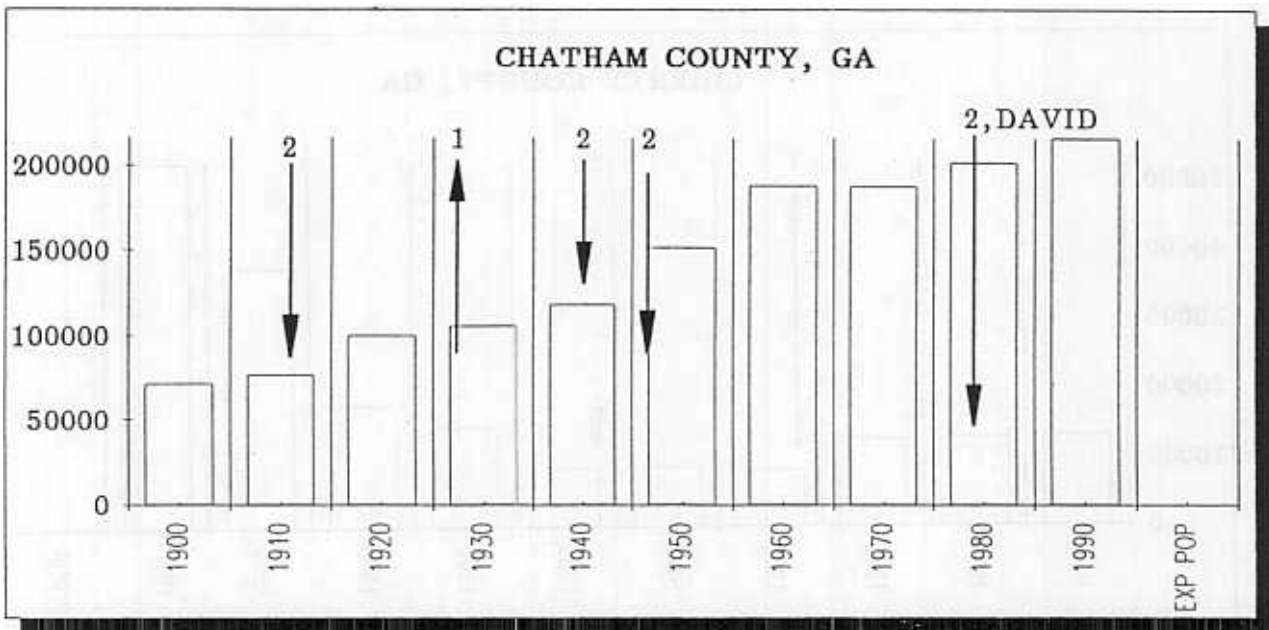
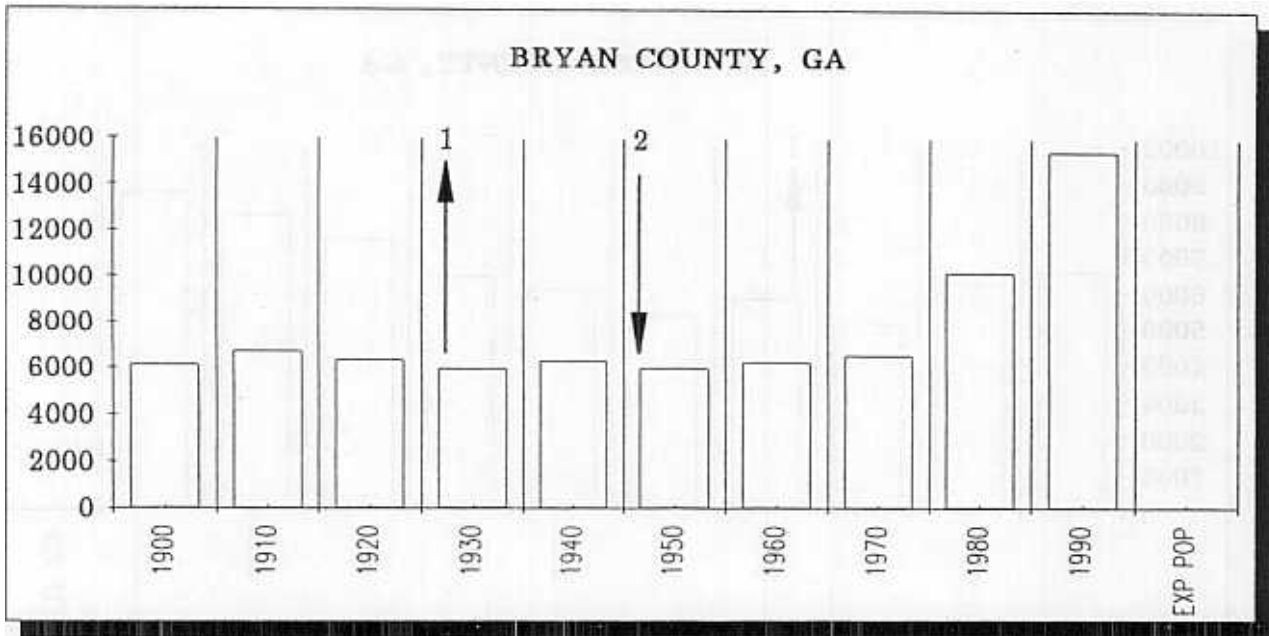
Camden, Glynn (Brunswick), McIntosh, Liberty, Bryan, Chatham (Savannah).

| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| | 7669 | 7690 | 6969 | 6338 | 5910 | 7322 | 9975 | 11334 | 13371 | 30167 | | 100 | |
| | 14317 | 15720 | 19370 | 19400 | 21920 | 29046 | 41954 | 50528 | 54981 | 62496 | | 100 | |
| | 6537 | 6442 | 5119 | 5763 | 5292 | 6008 | 6364 | 7371 | 8046 | 8634 | | 100 | |
| | 13093 | 12924 | 12707 | 8153 | 8595 | 8444 | 14487 | 17569 | 37583 | 52745 | | 100 | |
| | 6122 | 6702 | 6343 | 5952 | 6288 | 5965 | 6226 | 6539 | 10175 | 15438 | | 100 | |
| | 71239 | 76690 | 100032 | 105431 | 117970 | 151481 | 188299 | 187816 | 202226 | 216935 | | 100 | |
| GA COASTAL TOTAL | 118977 | 126168 | 150540 | 151037 | 165975 | 208266 | 267305 | 281157 | 326382 | 386415 | | 100 | |
| GA TOTAL | 2216331 | 2609121 | 2895832 | 2908506 | 3123723 | 3444578 | 3943116 | 4589575 | 5464265 | 6478216 | | | |





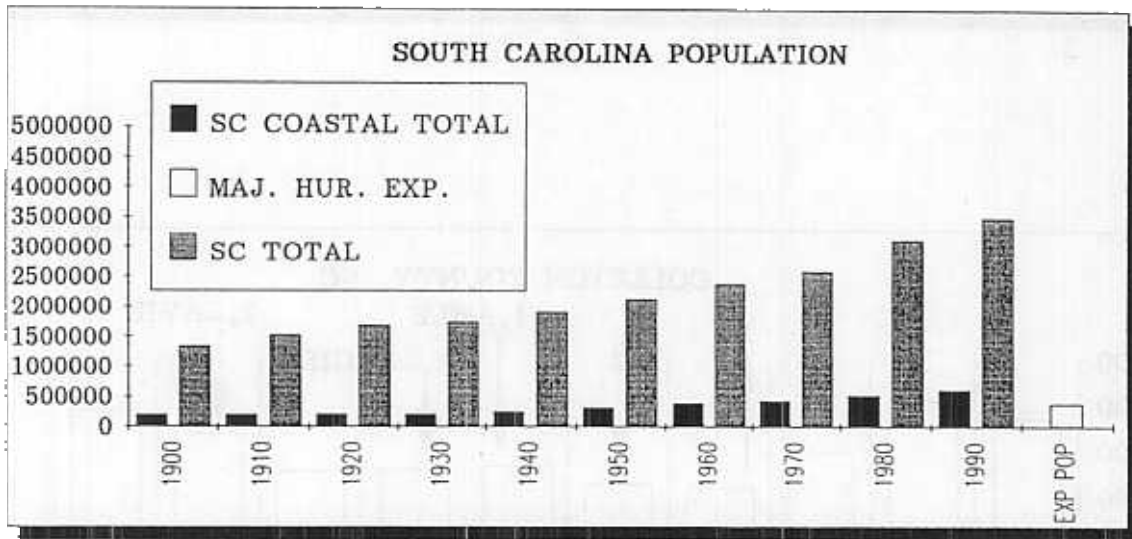


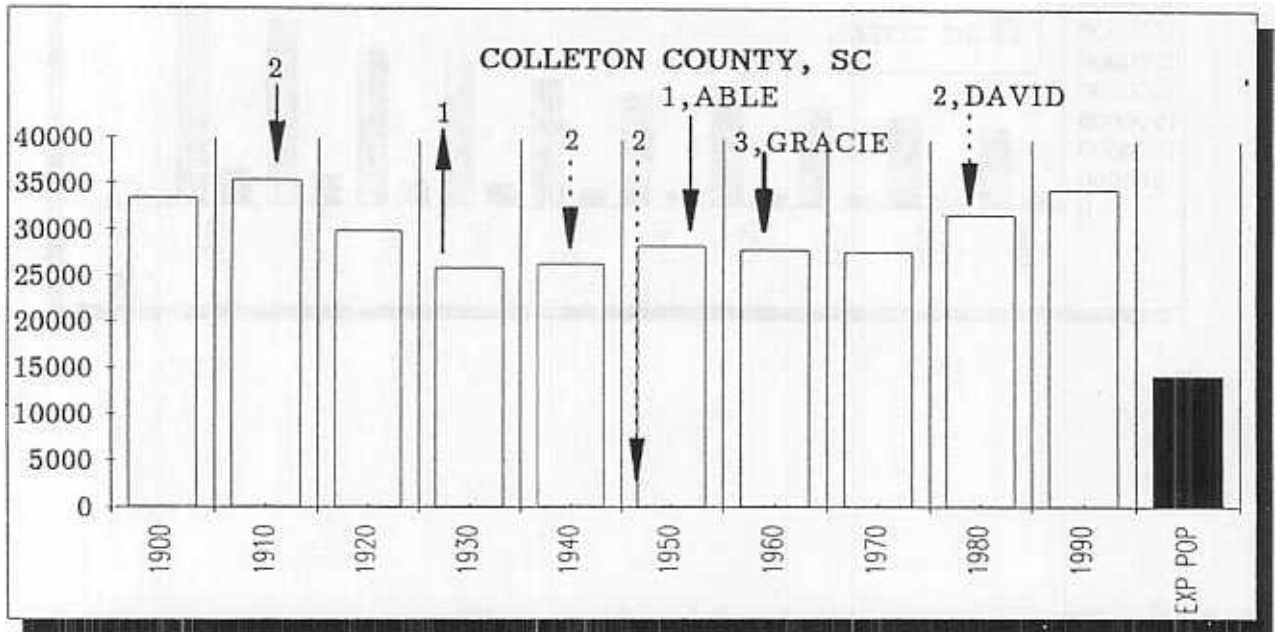
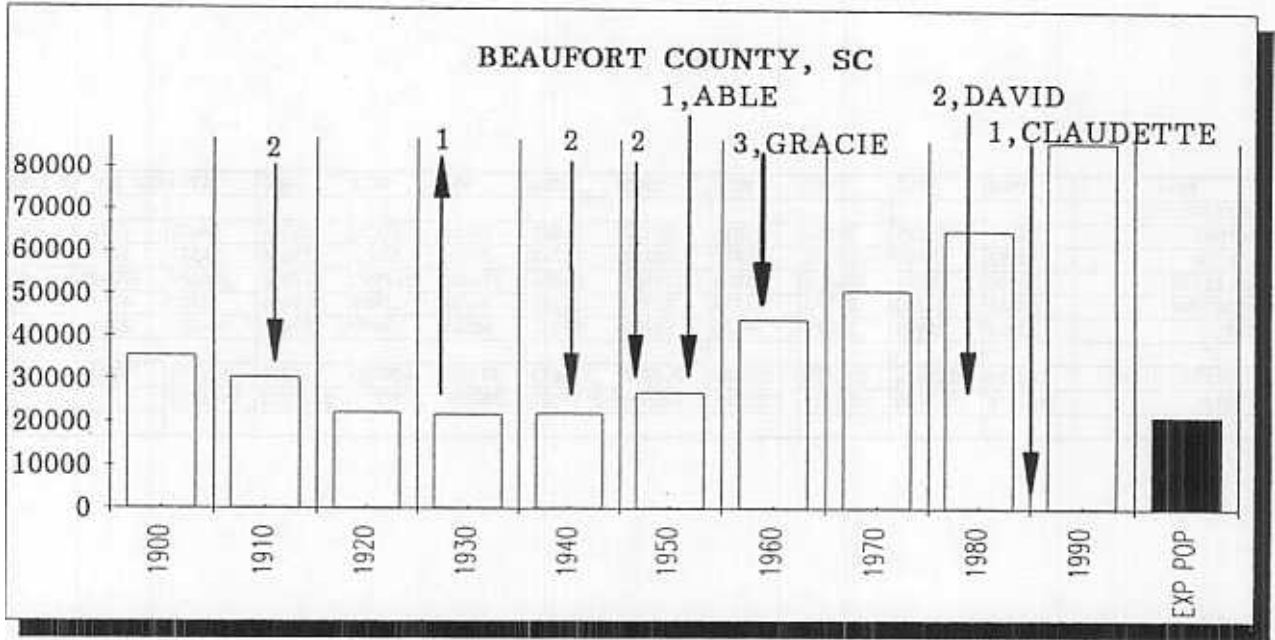


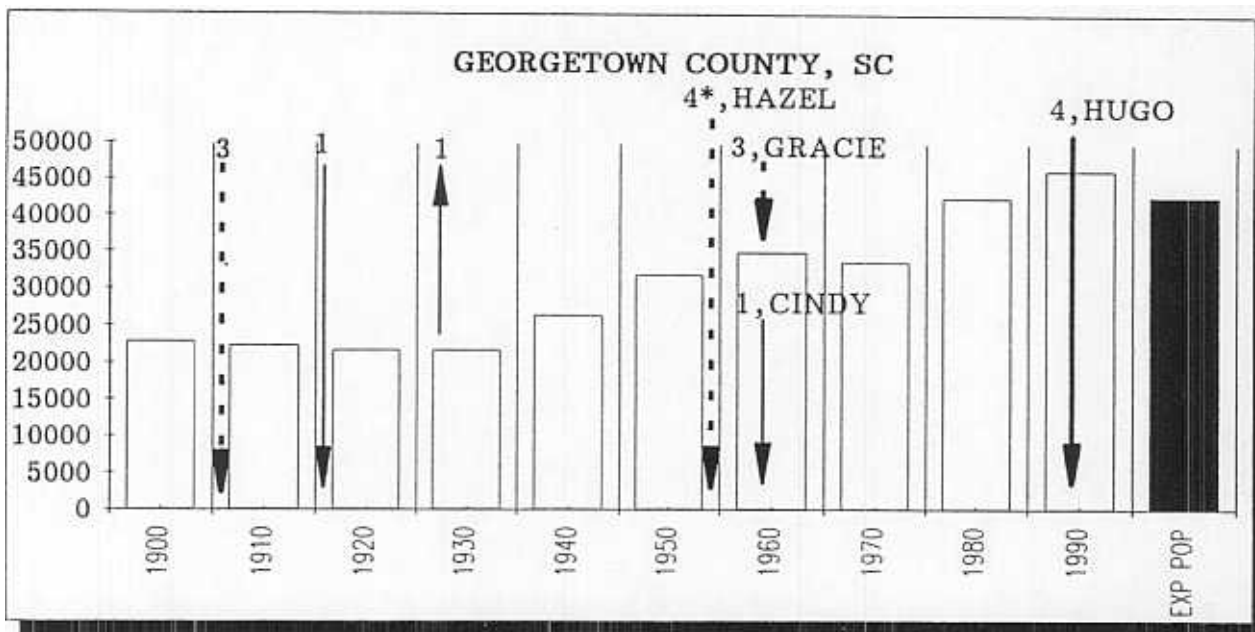
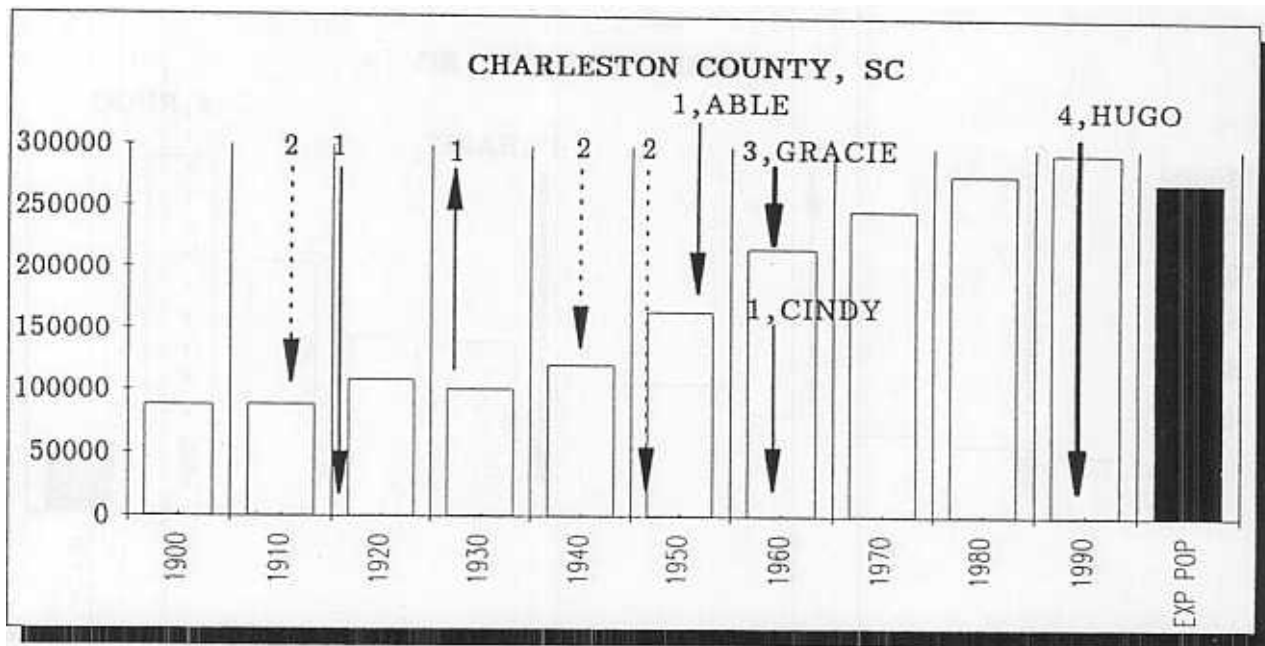
7. SOUTH CAROLINA (5)

Beaufort (Hilton Head), Colleton, Charleston (Charleston), Georgetown (Georgetown), Horry (Myrtle Beach).

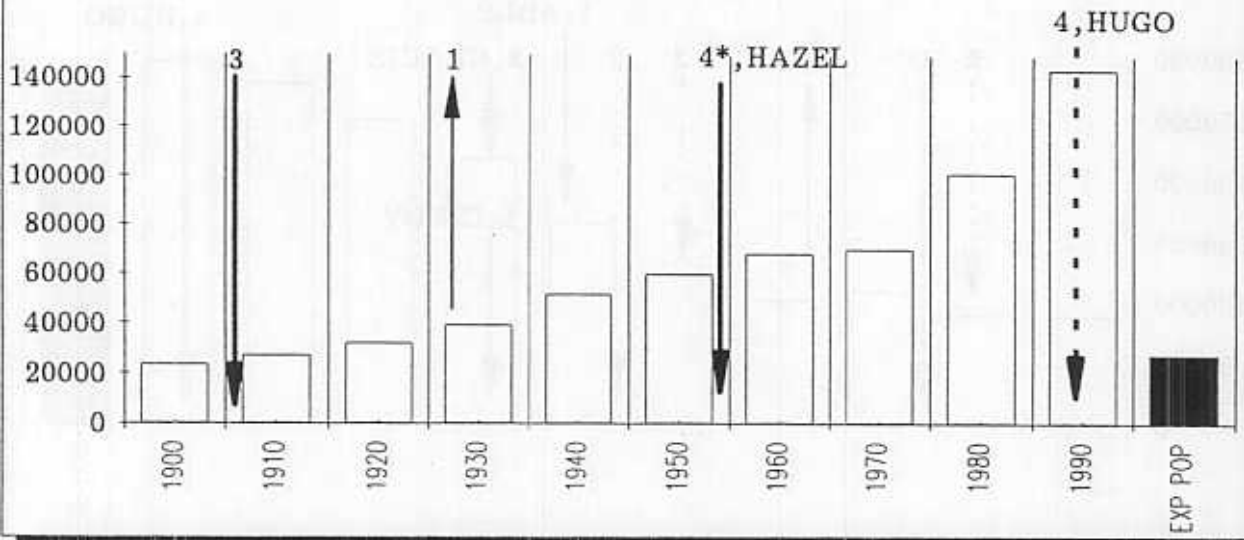
| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| BEAUFORT | 35495 | 30355 | 22269 | 21815 | 22037 | 26993 | 44187 | 51136 | 65364 | 86425 | 21523 | 75 | 1959 |
| COLLETON | 33452 | 35390 | 29897 | 25821 | 26268 | 28242 | 27816 | 27622 | 31676 | 34377 | 14119 | 59 | 1959 |
| CHARLESTON | 88006 | 88594 | 108450 | 101050 | 121105 | 164856 | 216382 | 247650 | 277308 | 295039 | 272121 | 8 | 1989 |
| GEORGETOWN | 22846 | 22270 | 21716 | 21738 | 26352 | 31762 | 34798 | 33500 | 42461 | 46302 | 42607 | 8 | 1989 |
| HORRY | 23364 | 26995 | 32077 | 39376 | 51951 | 59820 | 68247 | 69992 | 101419 | 144053 | 27741 | 81 | 1954 |
| SC COASTAL TOTAL | 203163 | 203604 | 214409 | 209800 | 247713 | 311673 | 391430 | 429900 | 518228 | 606196 | 378111 | 38 | |
| SC TOTAL | 1340316 | 1515400 | 1683724 | 1738765 | 1899804 | 2117027 | 2382594 | 2590713 | 3119208 | 3486703 | | | |







HORRY COUNTY, SC



NORTH CAROLINA

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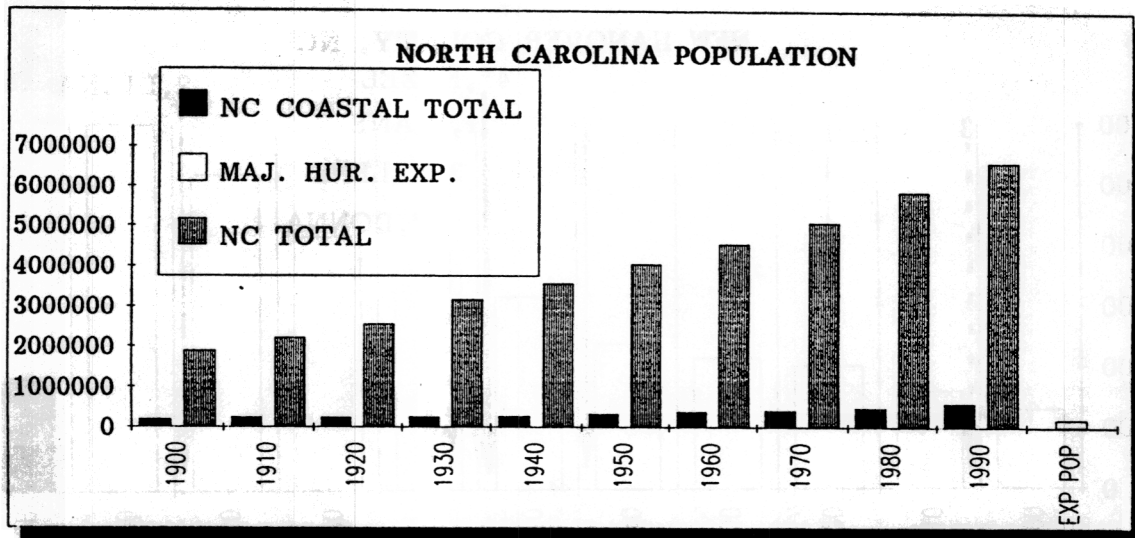
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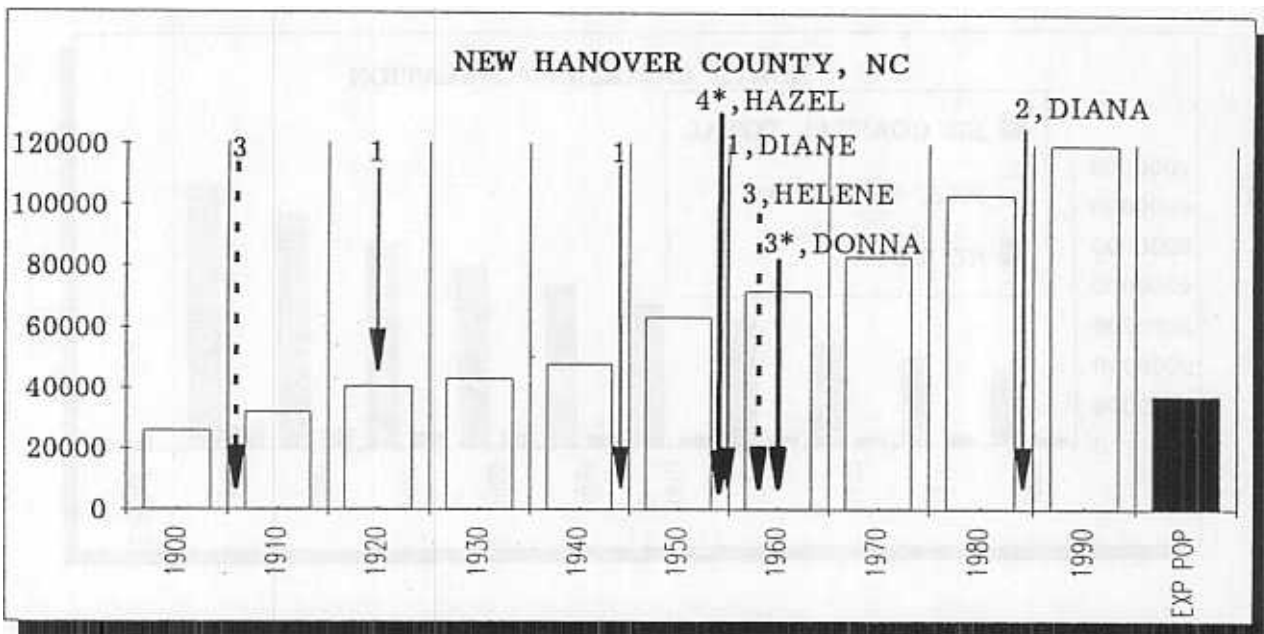
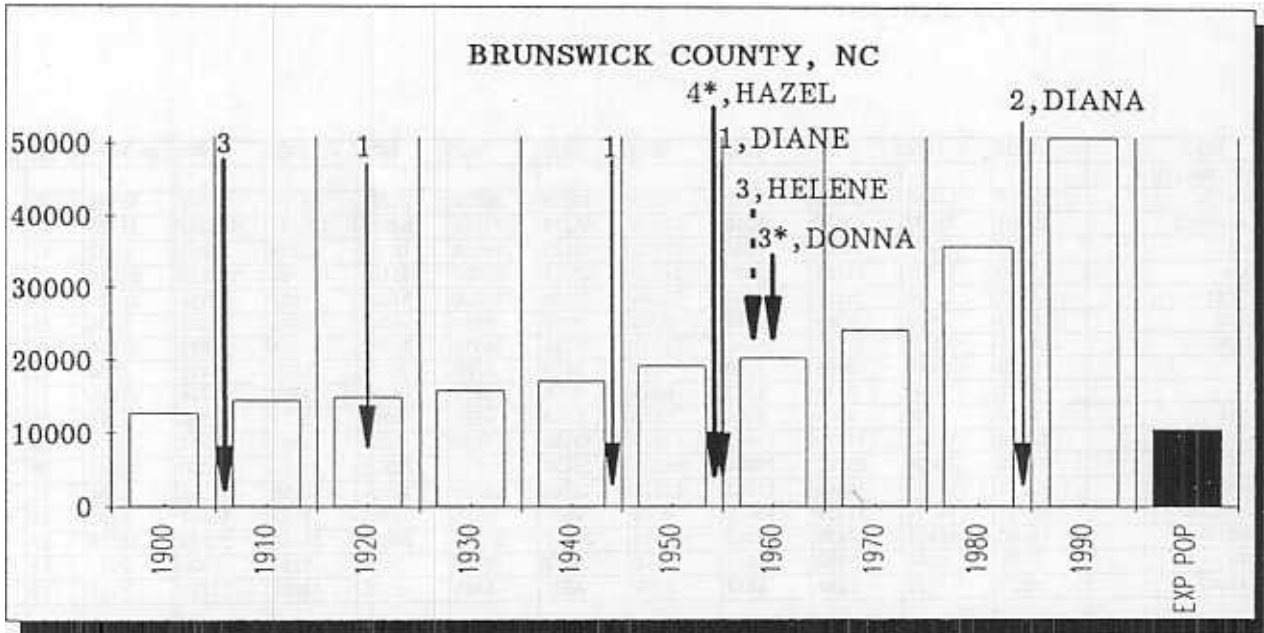
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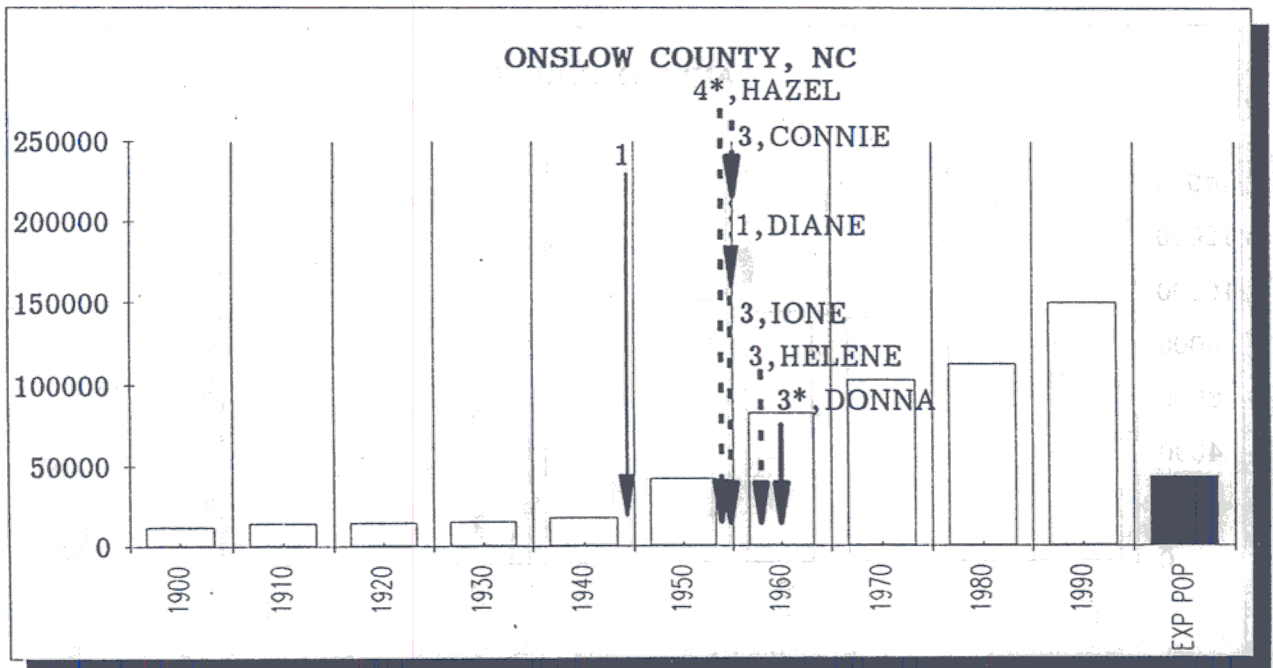
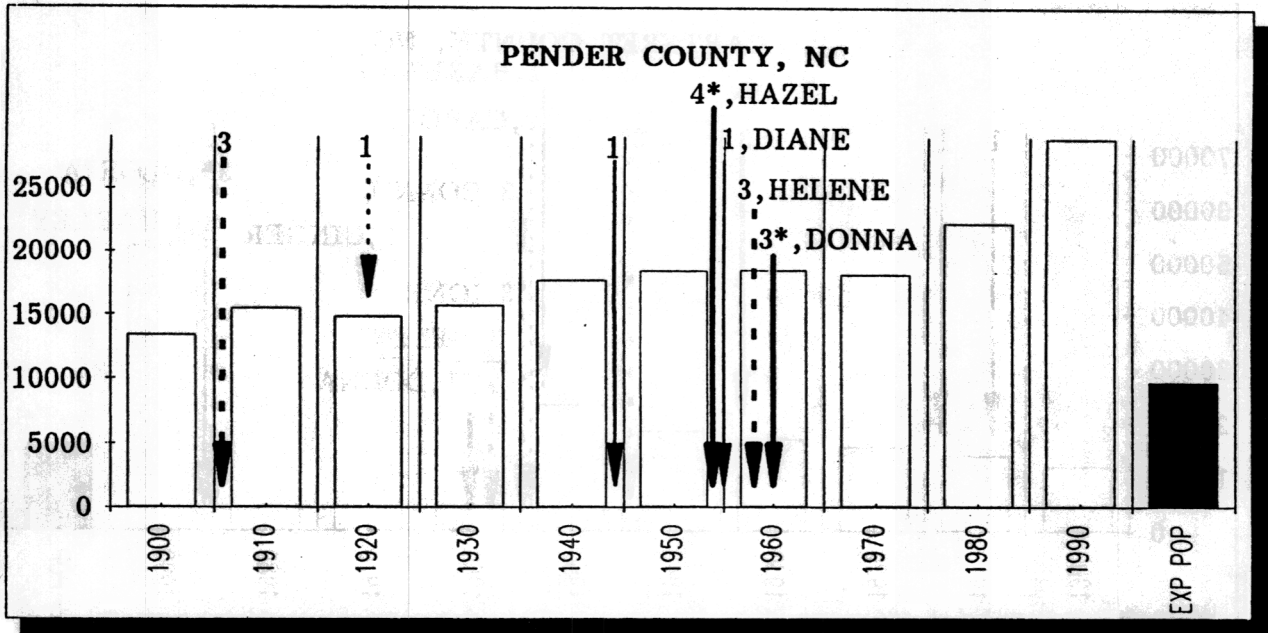
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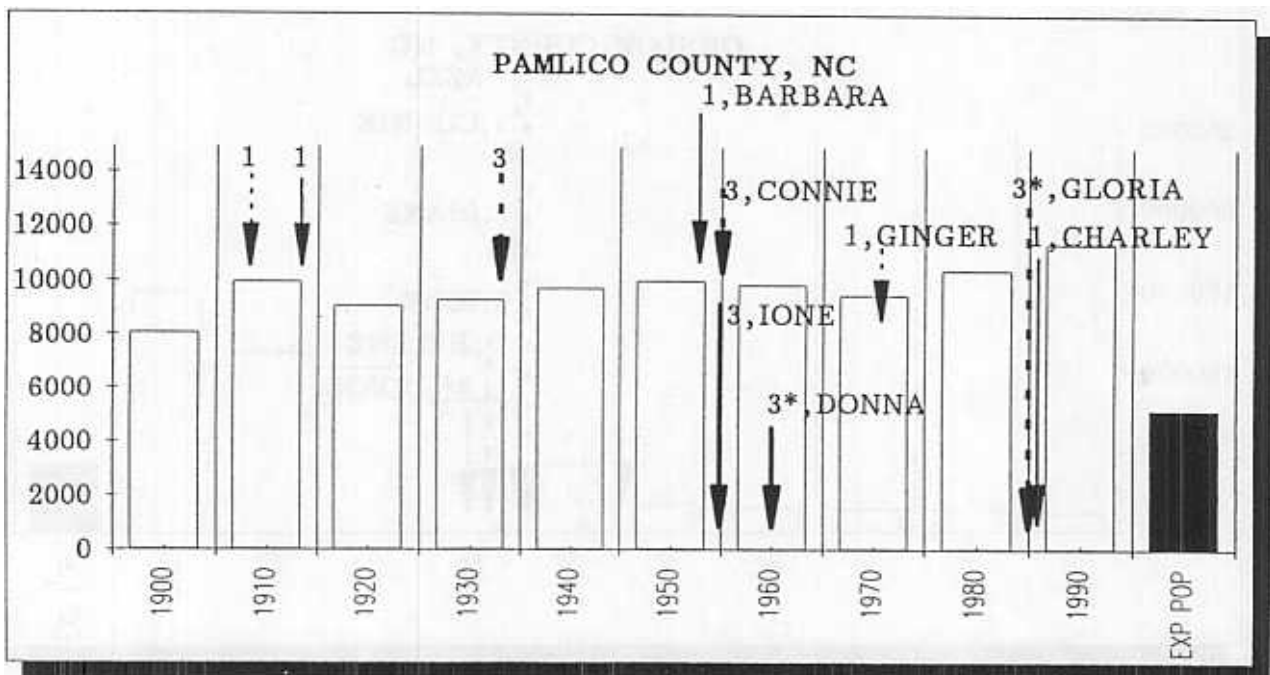
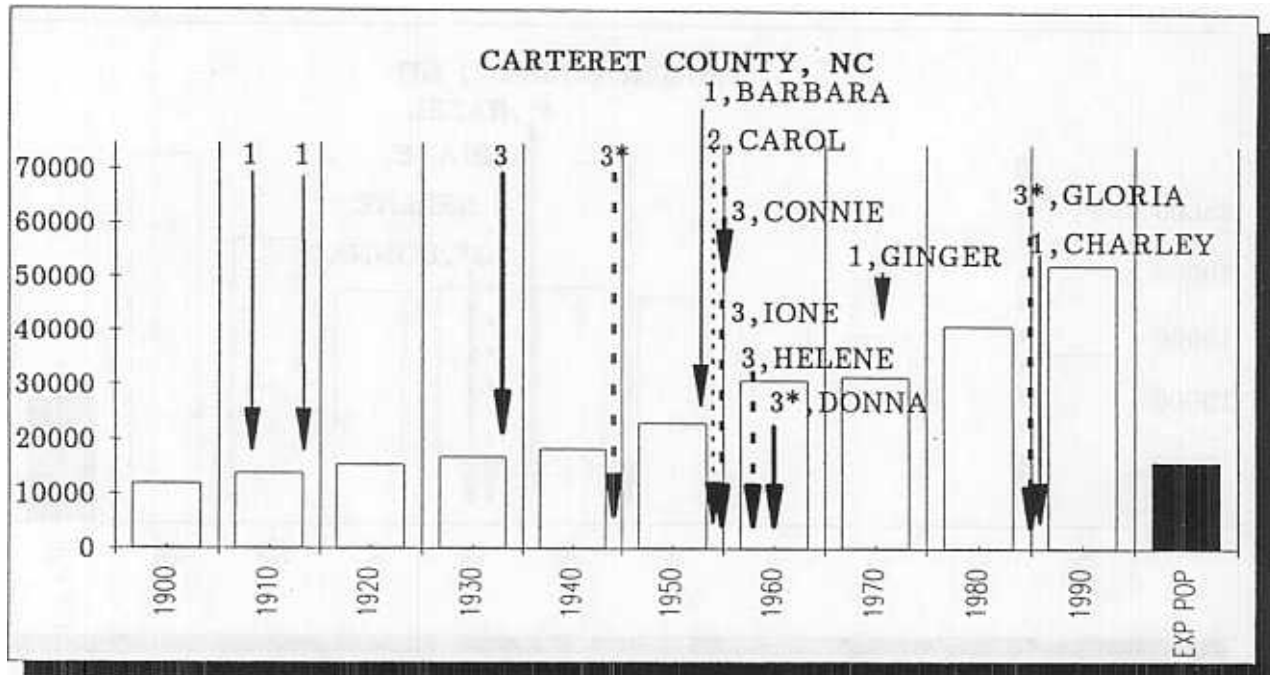
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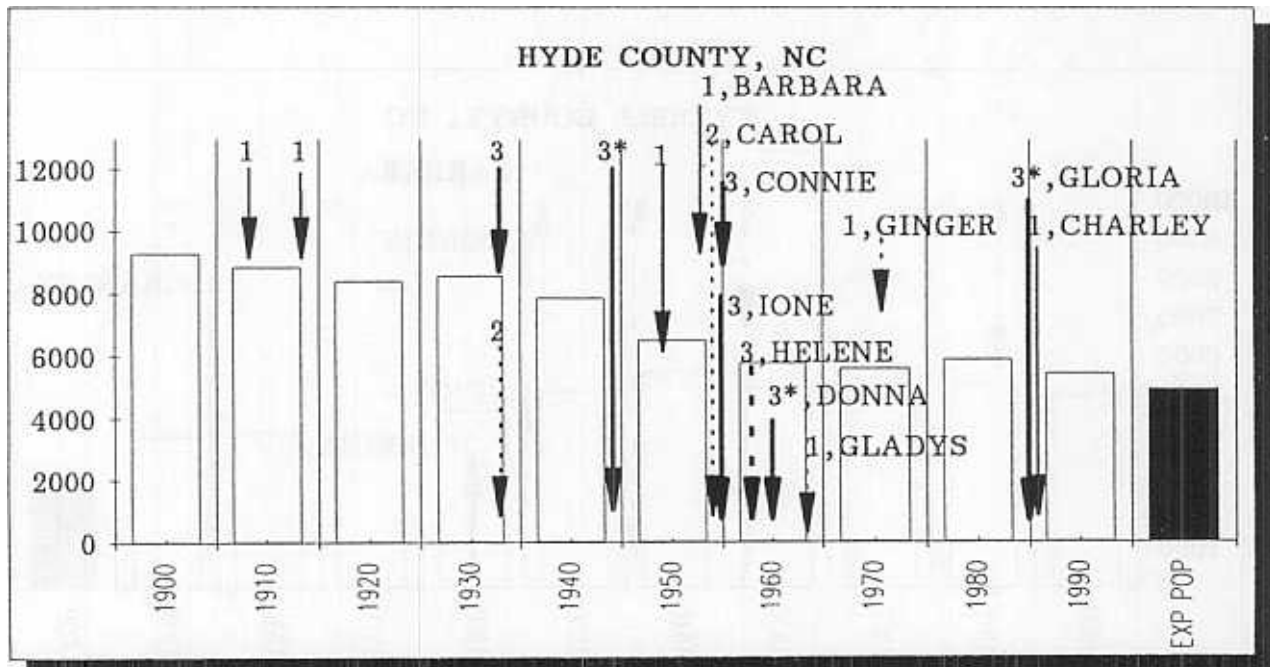
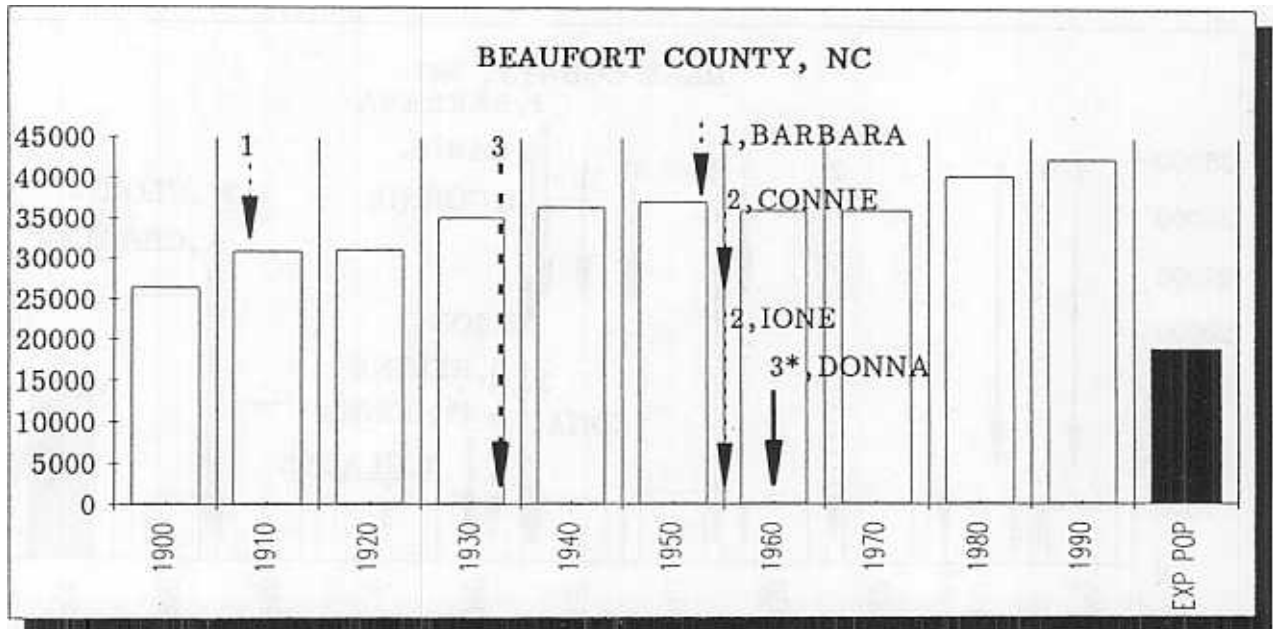
| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| BRUNSWICK | 12657 | 14432 | 14876 | 15818 | 17125 | 19238 | 20278 | 24223 | 35767 | 50895 | 10553 | 79 | 1960 |
| NEW HANOVER | 25785 | 32037 | 40620 | 43010 | 47935 | 63272 | 71742 | 82996 | 103471 | 120284 | 37335 | 69 | 1960 |
| PENDER | 13381 | 15471 | 14788 | 15686 | 17710 | 18423 | 18508 | 18149 | 22215 | 28855 | 9632 | 67 | 1960 |
| ONslow | 11940 | 14125 | 14703 | 15289 | 17939 | 42047 | 82706 | 103126 | 112784 | 149838 | 43040 | 71 | 1960 |
| CARTERET | 11811 | 13776 | 15384 | 16900 | 18284 | 23059 | 30940 | 31603 | 41092 | 52556 | 16101 | 69 | 1960 |
| PAMLICO | 8045 | 9966 | 9060 | 9299 | 9706 | 9993 | 9850 | 9467 | 10398 | 11372 | 5126 | 55 | 1960 |
| BEAUFORT | 26404 | 30877 | 31024 | 35026 | 36431 | 37134 | 36014 | 35980 | 40266 | 42283 | 18742 | 56 | 1960 |
| HYDE | 9278 | 8840 | 8386 | 8550 | 7860 | 6479 | 5765 | 5571 | 5873 | 5411 | 3000 | 45 | 1960 |
| DARE | 4757 | 4841 | 5115 | 5202 | 6041 | 5405 | 5935 | 6995 | 13377 | 22746 | 15724 | 31 | 1985 |
| TYRRELL | 4980 | 5219 | 4849 | 5164 | 5556 | 5048 | 4520 | 3806 | 3975 | 3856 | 2352 | 39 | 1960 |
| WASHINGTON | 10608 | 11062 | 11429 | 11603 | 12323 | 13180 | 13488 | 14038 | 14801 | 13997 | 7019 | 50 | 1960 |
| BERTIE | 20538 | 23039 | 23993 | 25894 | 26201 | 26439 | 24350 | 20528 | 21024 | 20388 | 12672 | 38 | 1960 |
| CHOWAN | 10258 | 11303 | 10649 | 11282 | 11572 | 12540 | 11729 | 10764 | 12558 | 13506 | 6104 | 55 | 1960 |
| PERQUIMANS | 10091 | 11054 | 11137 | 10668 | 9773 | 9602 | 9178 | 8351 | 9486 | 10447 | 4776 | 54 | 1960 |
| PASQUOTANK | 13660 | 16693 | 17670 | 19143 | 20568 | 24347 | 25630 | 26824 | 28462 | 31298 | 13338 | 57 | 1960 |
| CAMDEN | 5474 | 5640 | 5382 | 5461 | 5440 | 5223 | 5598 | 5453 | 5829 | 5904 | 2913 | 51 | 1960 |
| CURRITUCK | 6529 | 7693 | 7268 | 6710 | 6709 | 6201 | 6601 | 6976 | 11089 | 13736 | 3435 | 75 | 1960 |
| NC COASTAL TOTAL | 206196 | 236068 | 246333 | 260705 | 277173 | 327630 | 382832 | 414850 | 492467 | 597372 | 211862 | 65 | |
| NC TOTAL | 1893810 | 2206287 | 2559123 | 3170276 | 3571623 | 4061929 | 4556155 | 5084451 | 5874429 | 6628637 | | | |

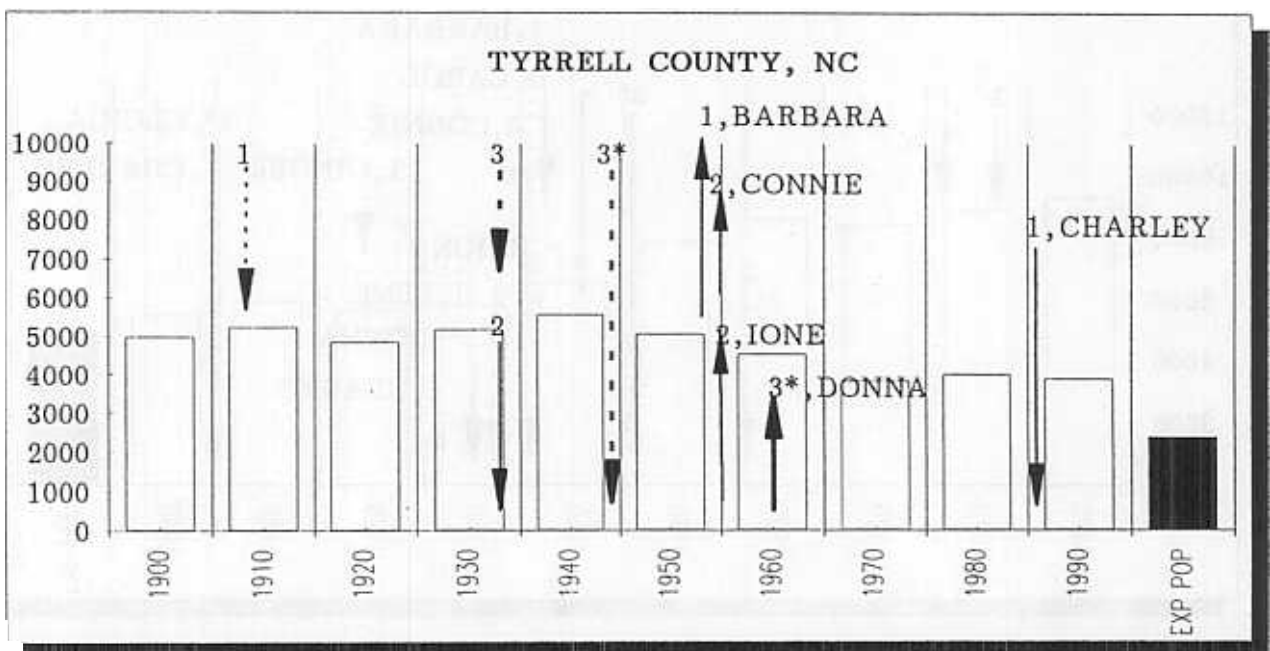
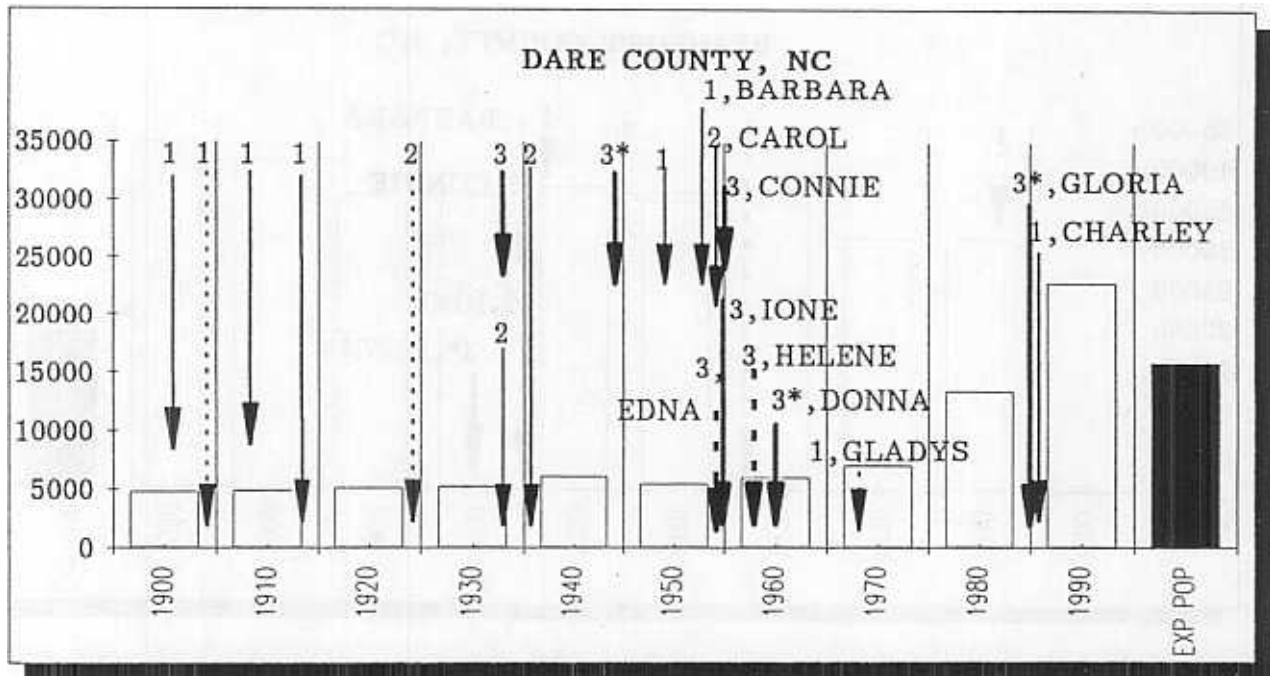


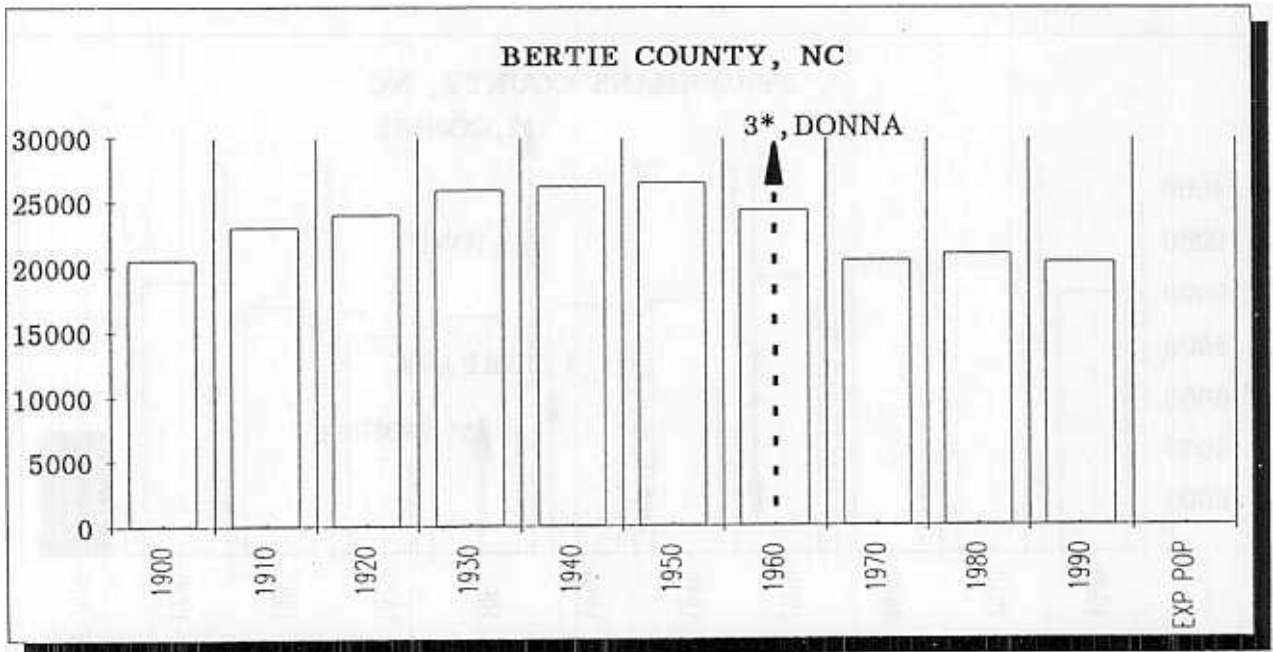
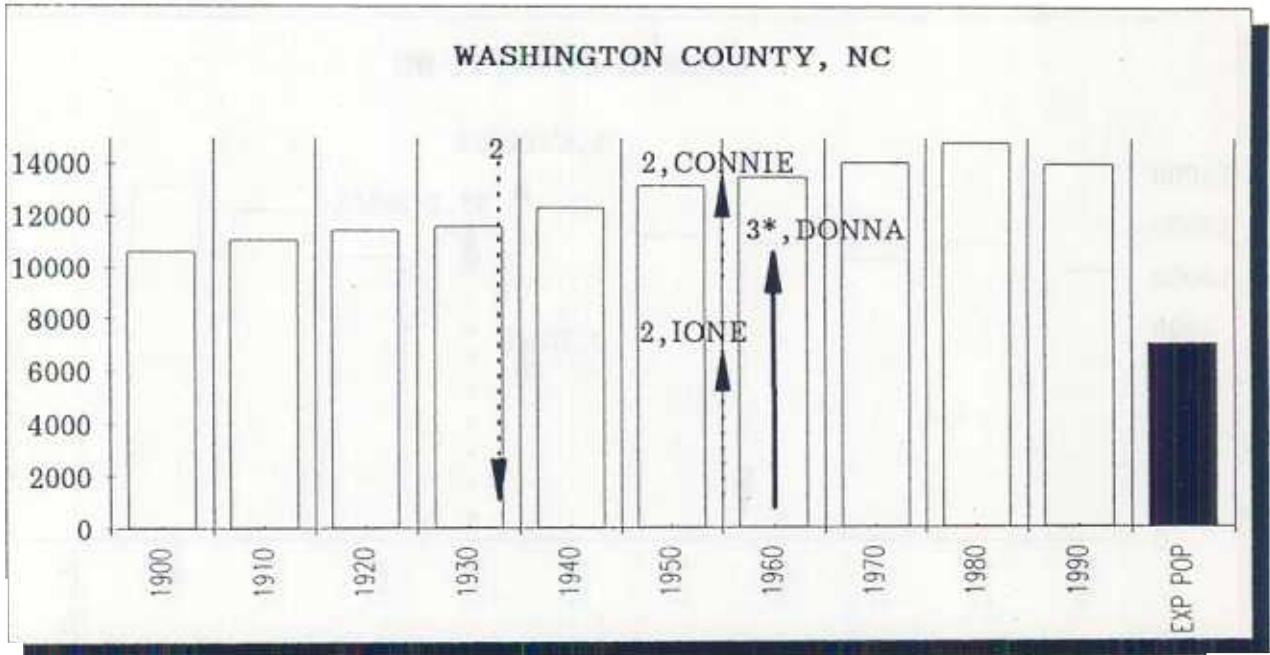


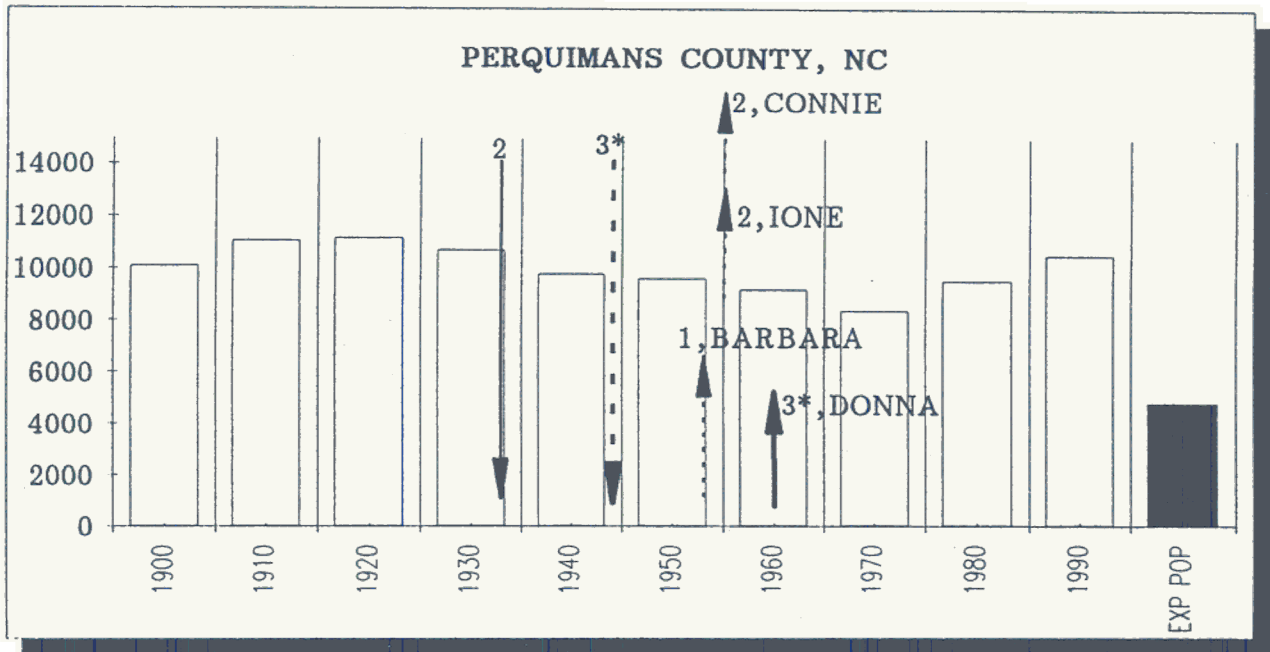
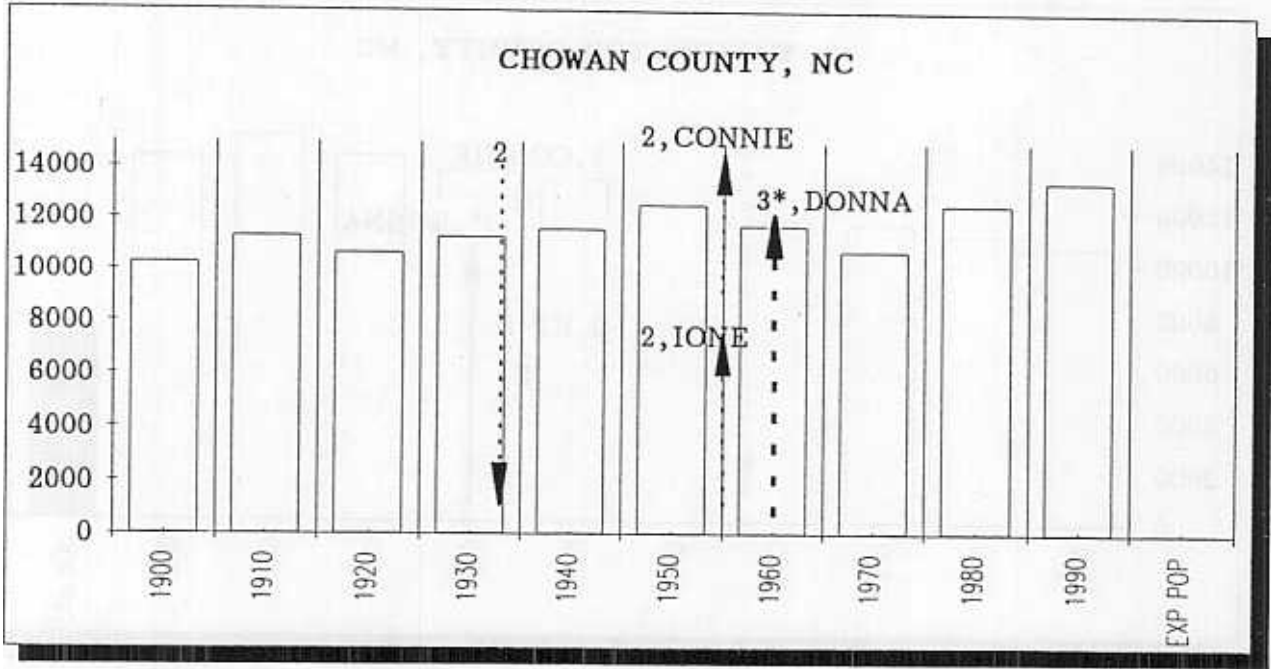


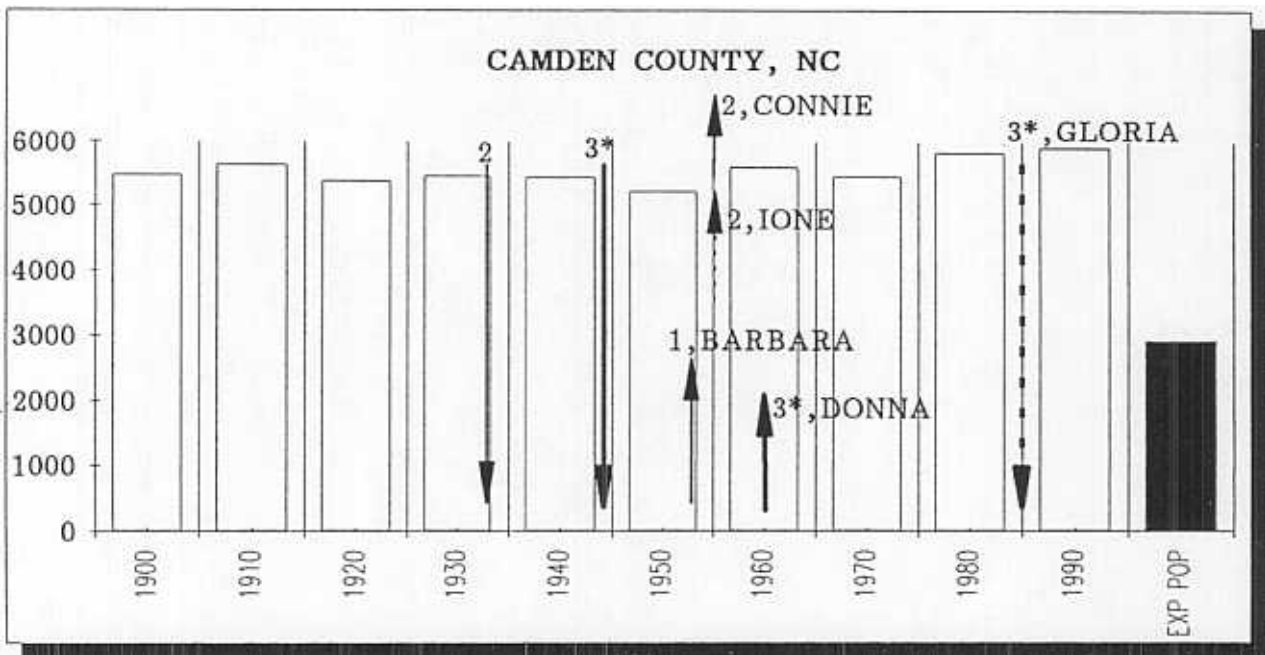
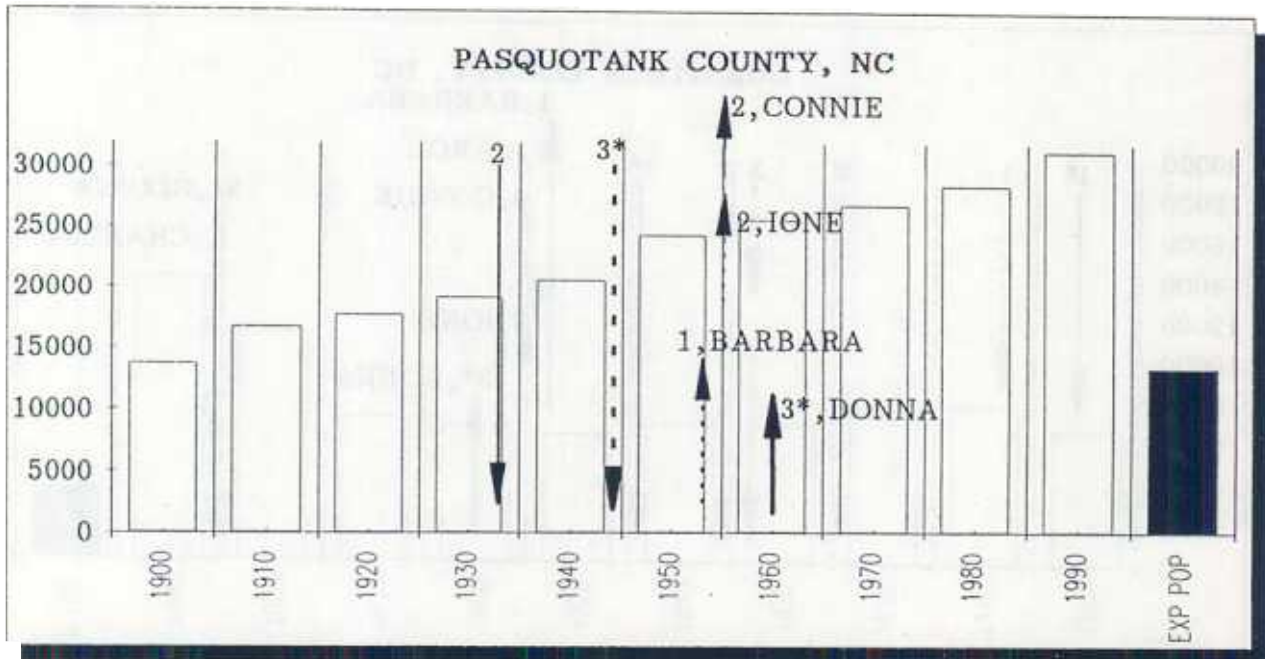


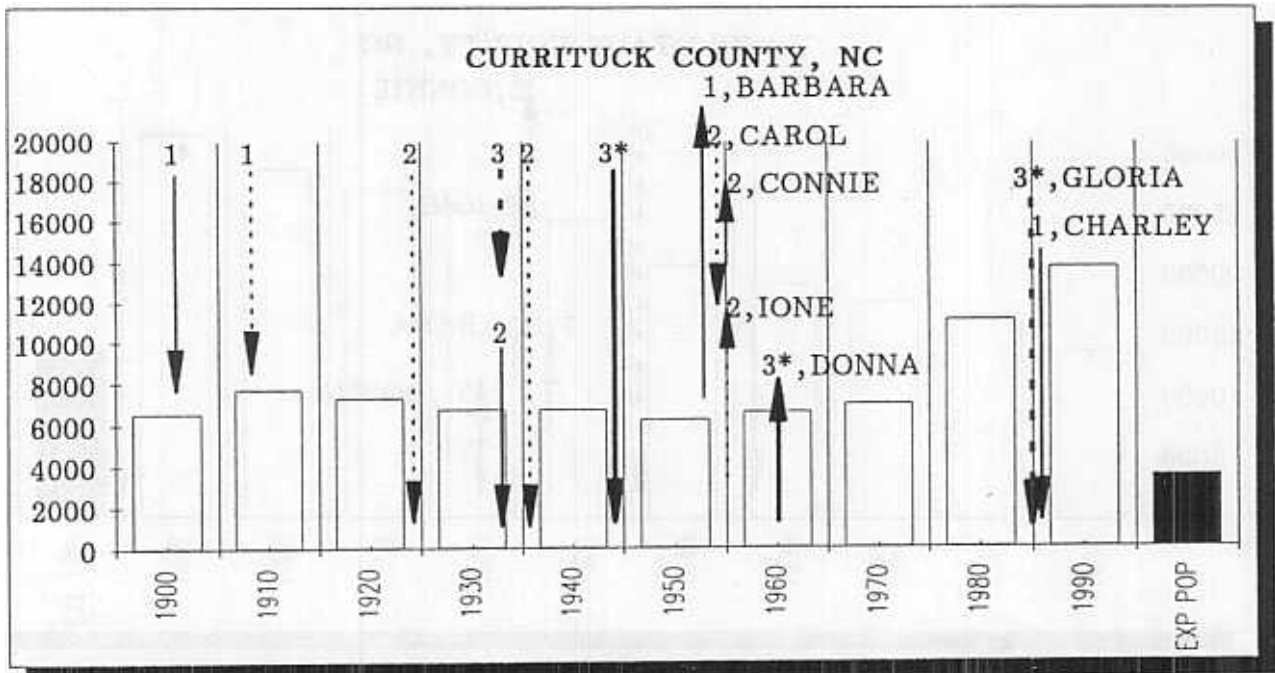










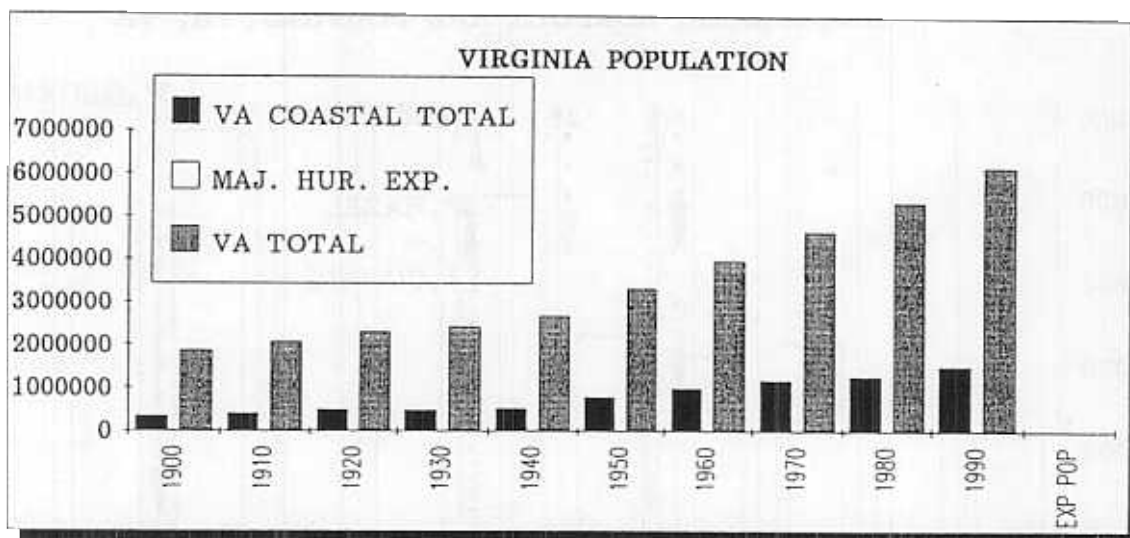


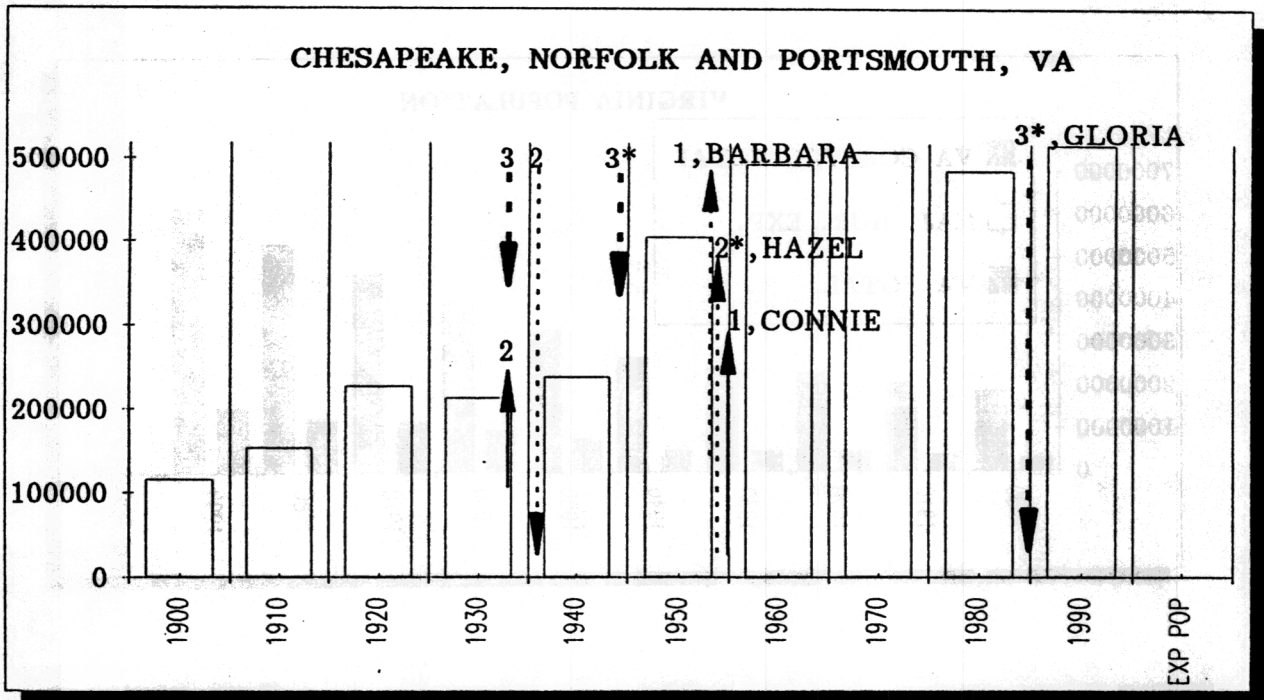
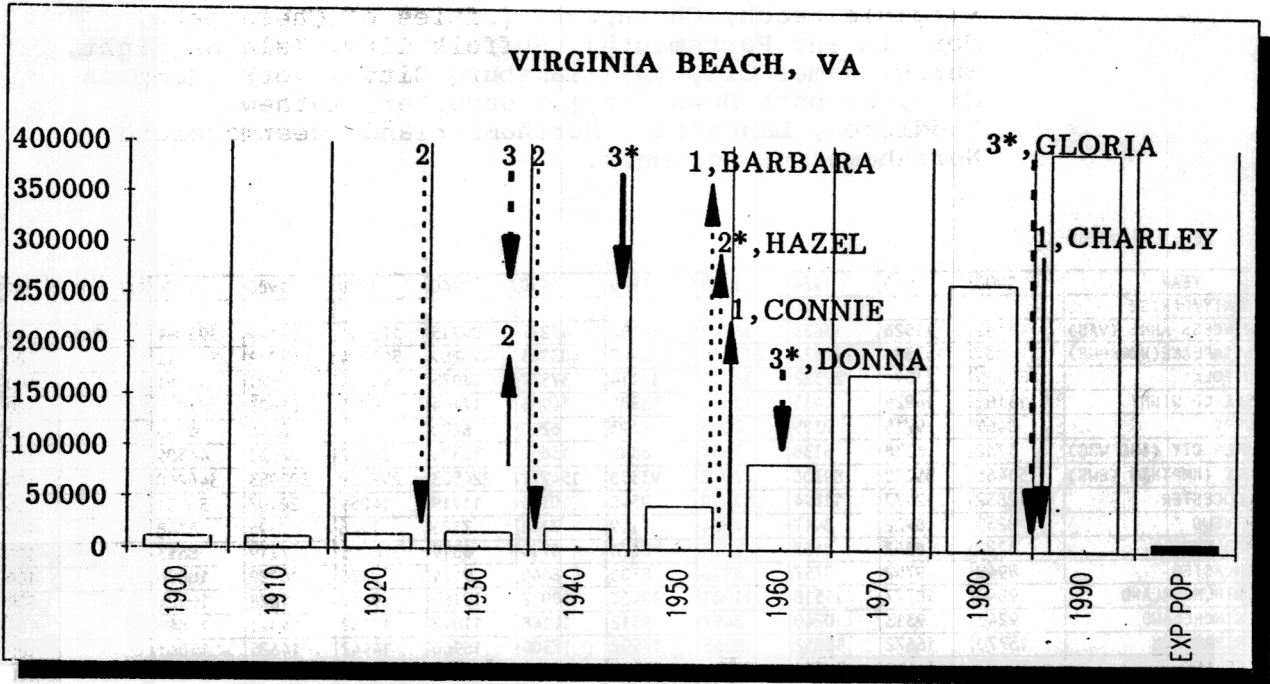
9. VIRGINIA 15)

(NOTE: Several independent cities are listed instead of counties. See notes in Virginia table, Appendix C).

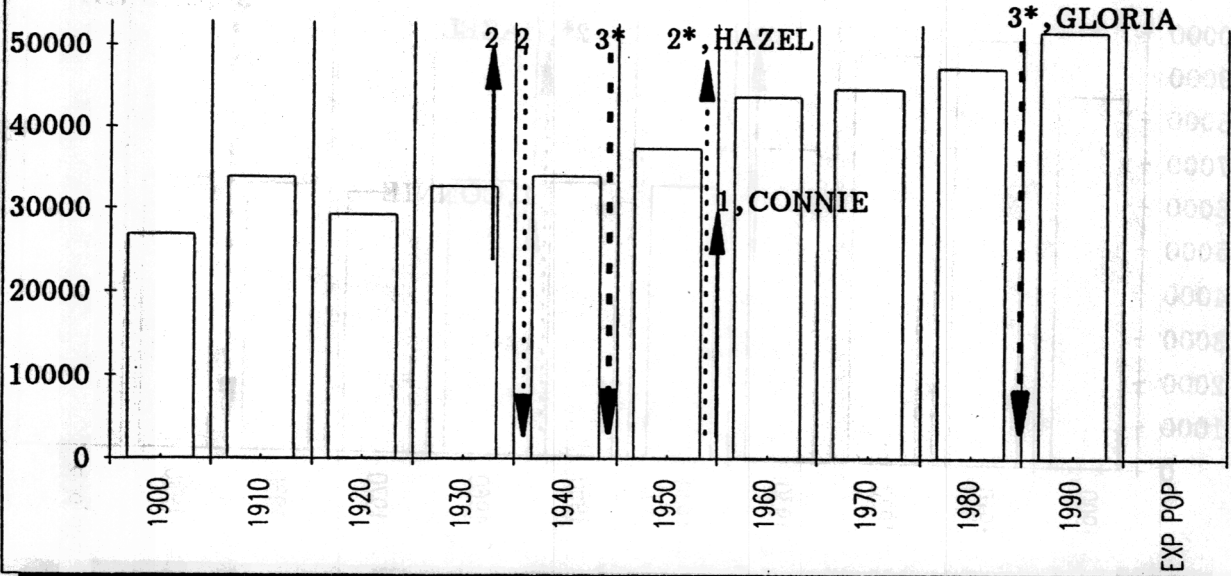
Virginia Beach, Chesapeake (Cities of Chesapeake, Norfolk and Portsmouth), Suffolk City, Isle of Wight Surry, James City (Williamsburg City), York (Hampton City, Newport News City) Gloucester, Mathews, Middlesex, Lancaster, Northumberland, Westmoreland, Northhampton, Accomack.

| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| PRINCESS ANNE (VAB) | 11192 | 11526 | 13626 | 16282 | 19984 | 42277 | 84215 | 172106 | 262199 | 393069 | 8887 | 98 | 1944 |
| CHESAPEAKE (NOR&PMH) | 114831 | 153386 | 227522 | 213353 | 238943 | 403923 | 493289 | 508494 | 485782 | 517112 | | 100 | |
| SUFFOLK | 26905 | 33894 | 29322 | 32801 | 34114 | 37577 | 43975 | 45024 | 47621 | 52141 | | 100 | |
| ISLE OF WIGHT | 13102 | 14929 | 14433 | 13409 | 13381 | 14906 | 17164 | 18285 | 21603 | 25053 | | 100 | |
| SURRY | 8469 | 9715 | 9305 | 7096 | 6193 | 6220 | 6220 | 5882 | 6046 | 6145 | | 100 | |
| JAMES CTY (INC WBG) | 5732 | 6338 | 6138 | 7657 | 8849 | 13052 | 18371 | 26922 | 32633 | 46389 | | 100 | |
| YORK (HMPTN&N NEWS) | 51465 | 55228 | 80308 | 77078 | 93353 | 154977 | 224503 | 292159 | 302983 | 346260 | | 100 | |
| GLOUCESTER | 12832 | 12477 | 11894 | 11019 | 9548 | 10343 | 11919 | 14059 | 20107 | 30131 | | 100 | |
| MATHEWS | 8239 | 8922 | 8447 | 7884 | 7149 | 7148 | 7121 | 7168 | 7995 | 8348 | | 100 | |
| MIDDLESEX | 8220 | 8852 | 8157 | 7273 | 6673 | 6715 | 6319 | 6295 | 7719 | 8653 | | 100 | |
| LANCASTER | 8949 | 9752 | 9757 | 8896 | 8786 | 8640 | 9174 | 9126 | 10129 | 10896 | | 100 | |
| NORTHUMBERLAND | 9846 | 10777 | 11518 | 11081 | 10463 | 10012 | 10185 | 9239 | 9828 | 10524 | | 100 | |
| WESTMORELAND | 9243 | 9313 | 10240 | 8497 | 9512 | 10148 | 11042 | 12142 | 14041 | 15840 | | 100 | |
| NORTHAMPTON | 13770 | 16672 | 18852 | 18565 | 17597 | 17300 | 16966 | 14442 | 14625 | 13061 | | 100 | |
| ACCOMACK | 32570 | 36650 | 34795 | 35854 | 33030 | 33832 | 30635 | 29004 | 31286 | 31703 | | 100 | |
| VA COASTAL TOTAL | 335365 | 398431 | 494314 | 476745 | 517575 | 777070 | 991098 | 1170347 | 1274597 | 1515325 | 8887 | 99 | |
| VA TOTAL | 1854184 | 2061612 | 2309187 | 2421851 | 2677773 | 3318680 | 3966949 | 4651448 | 5346279 | 6187358 | | | |

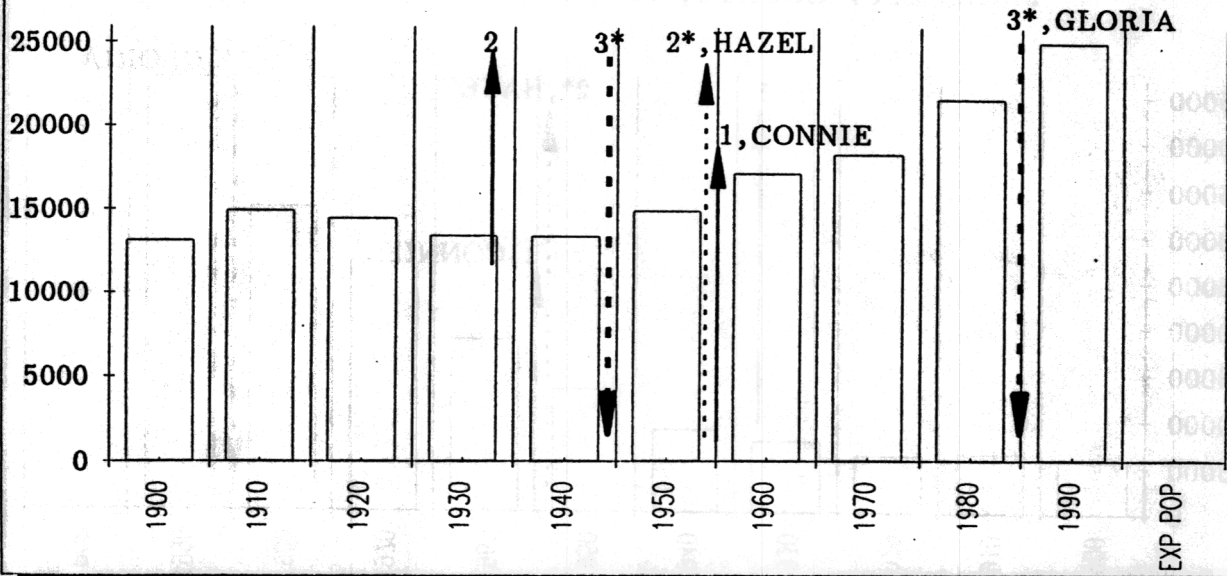


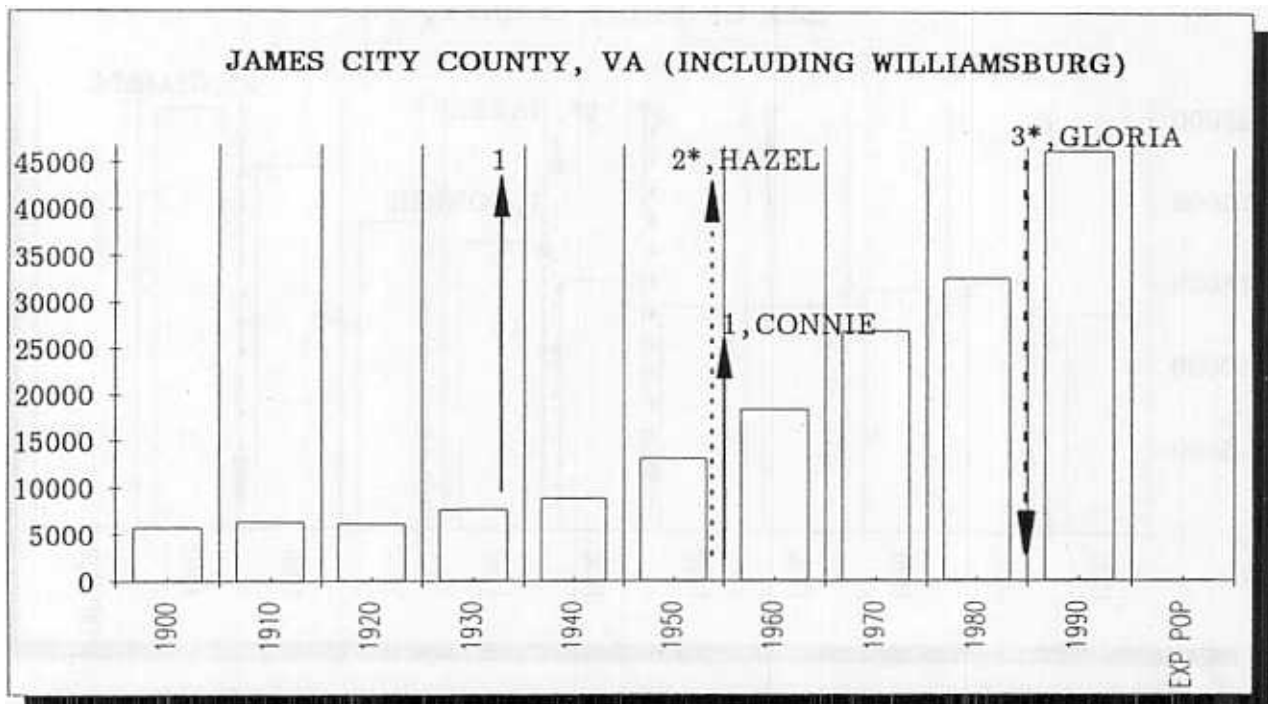
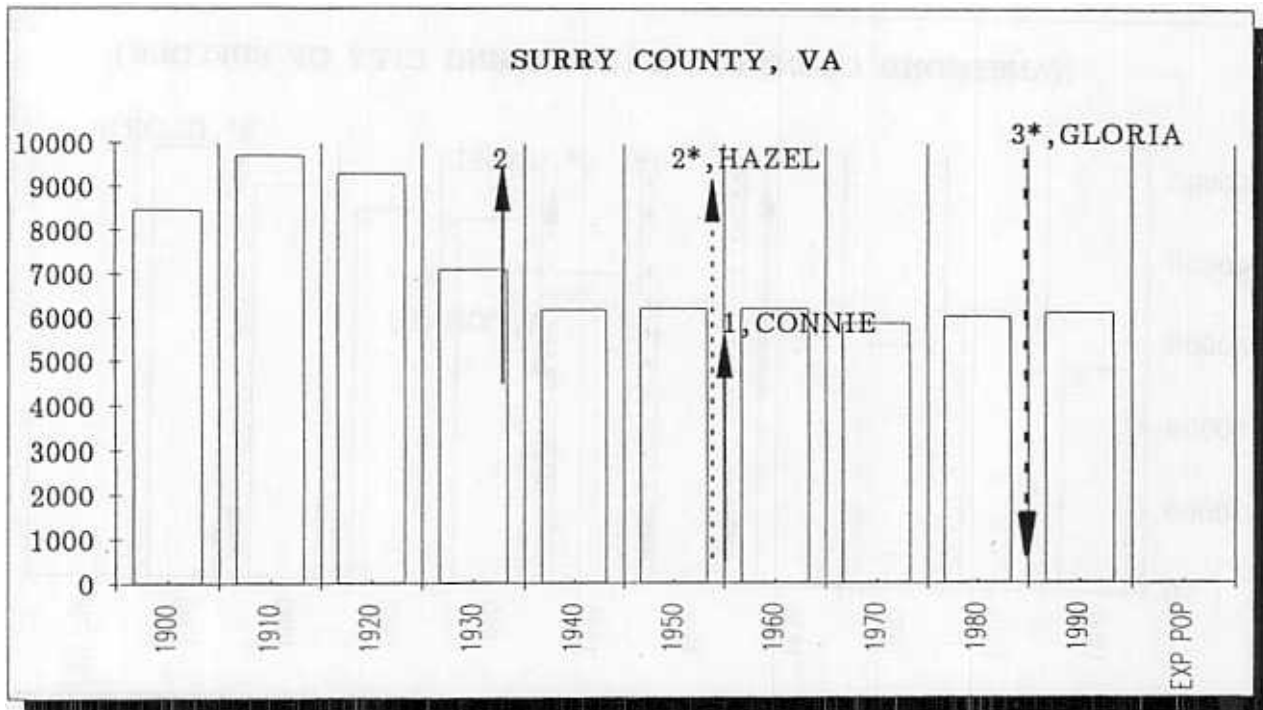


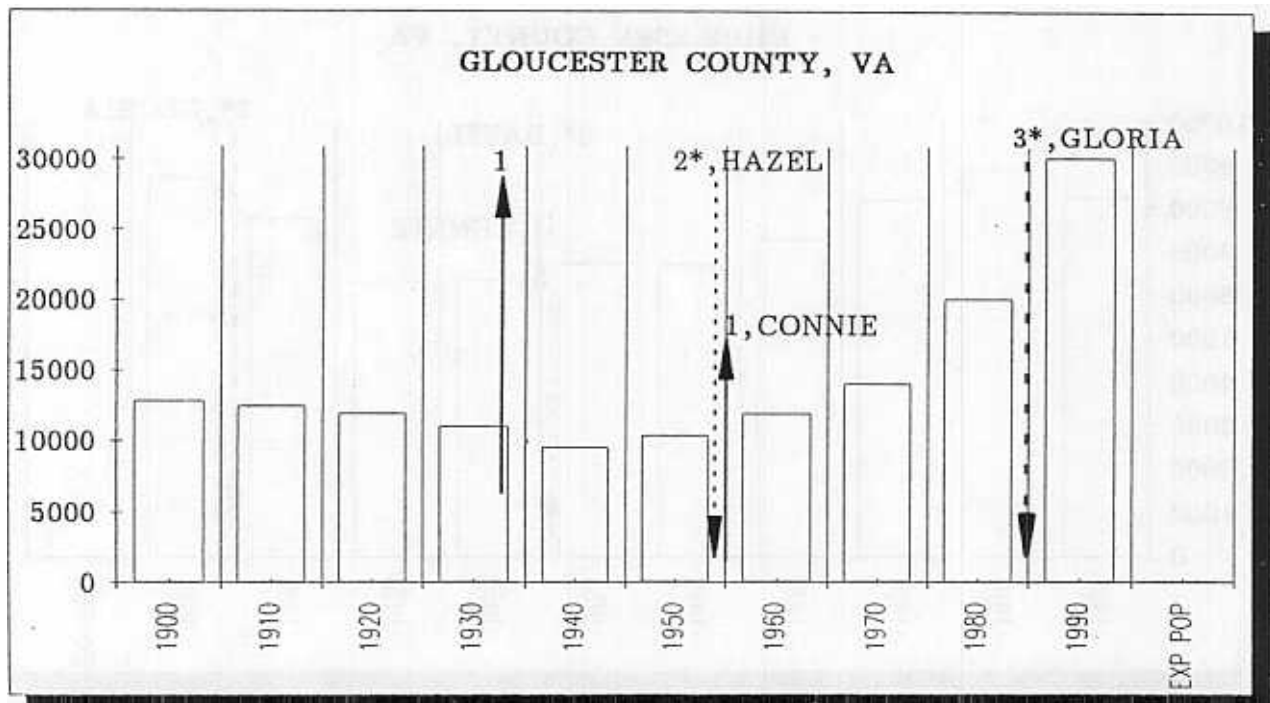
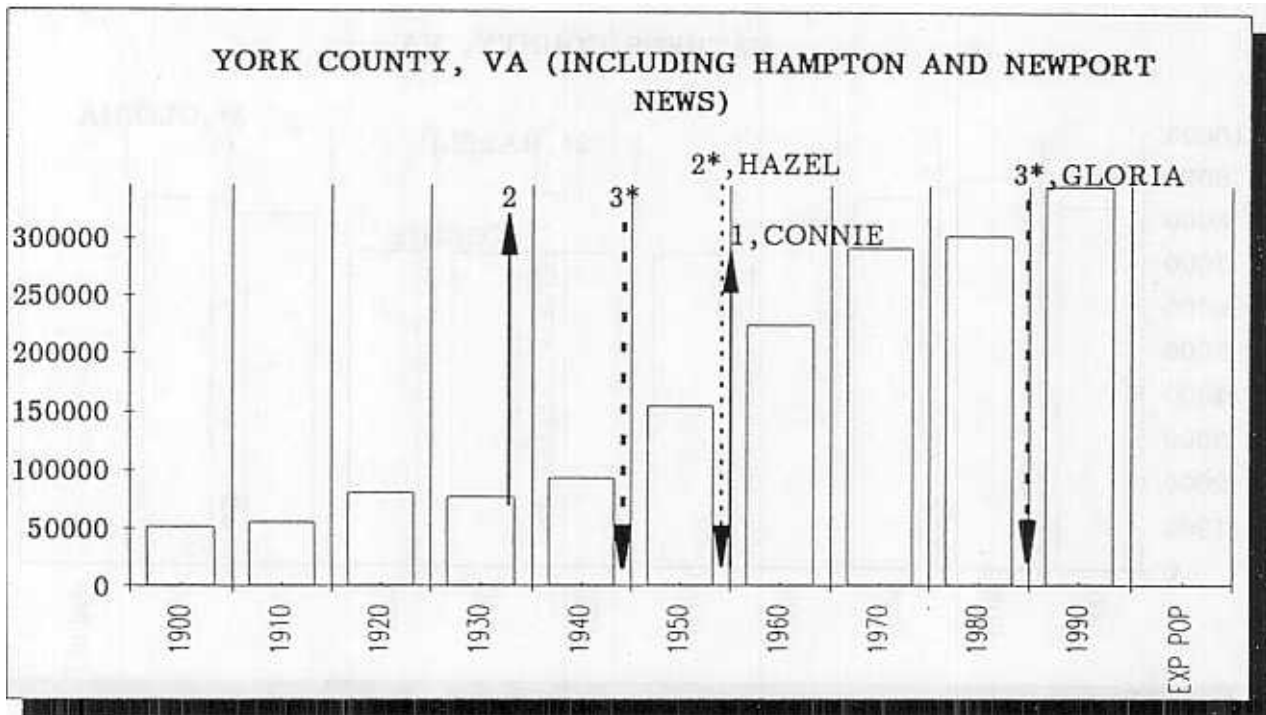
NANSEMOND COUNTY, VA (INCLUDING CITY OF SUFFOLK)

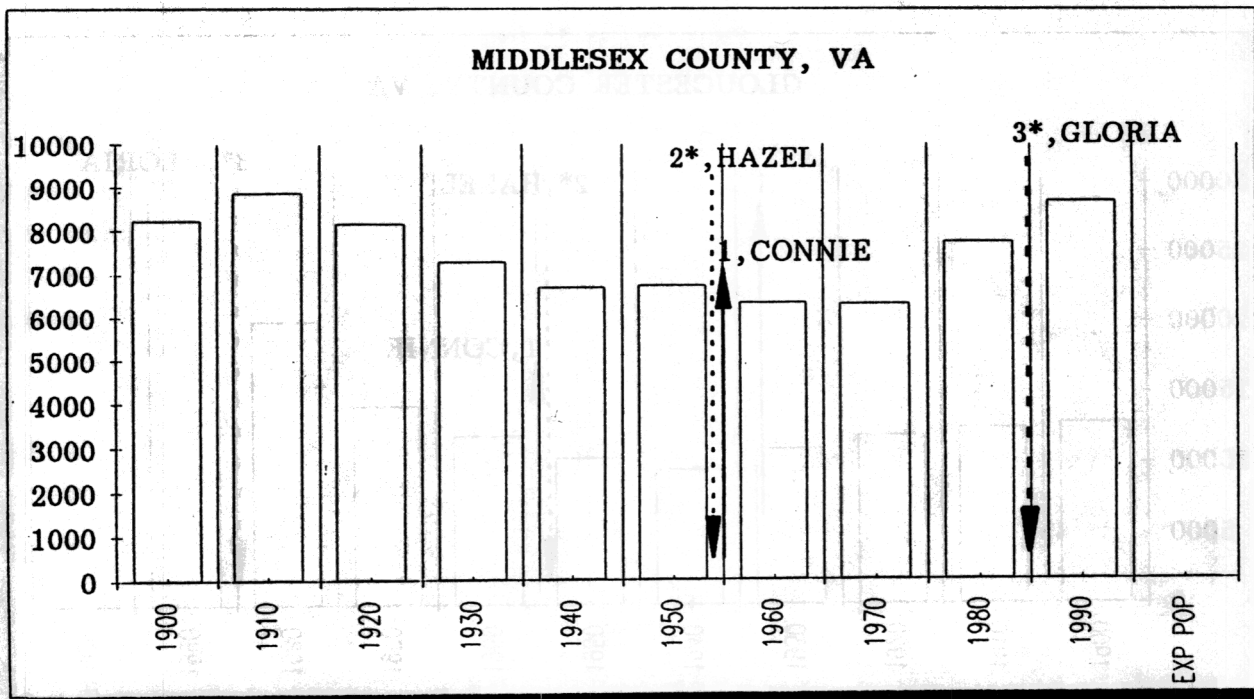
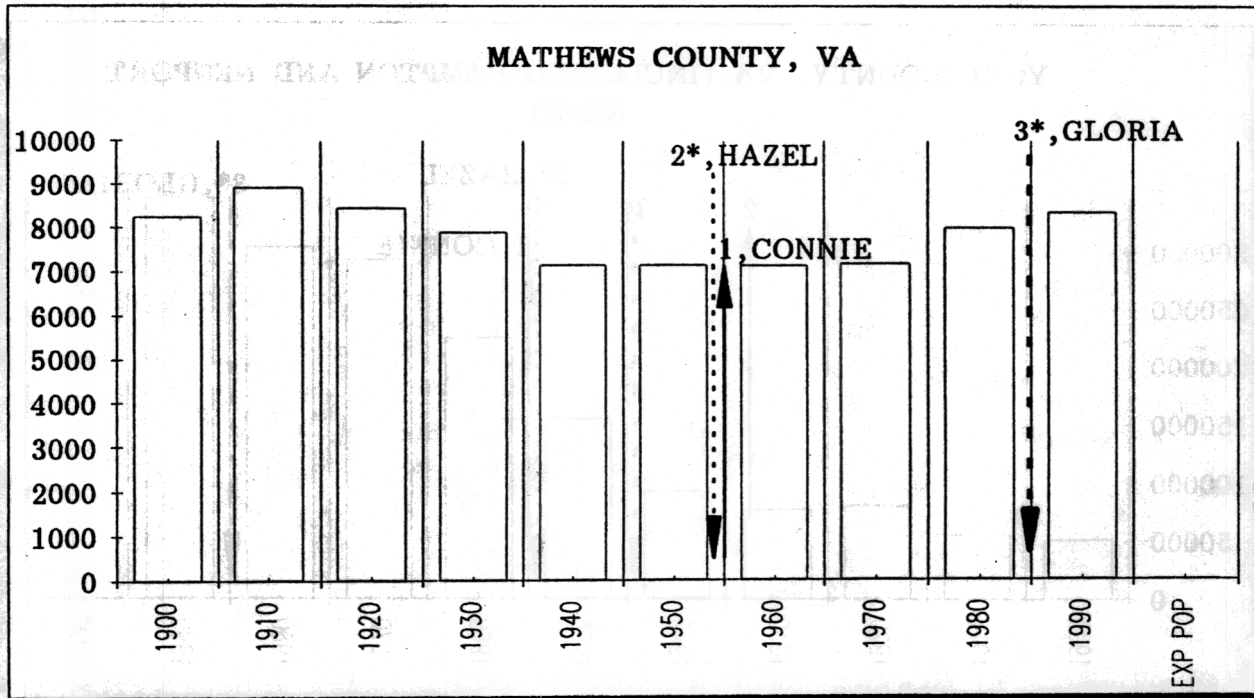


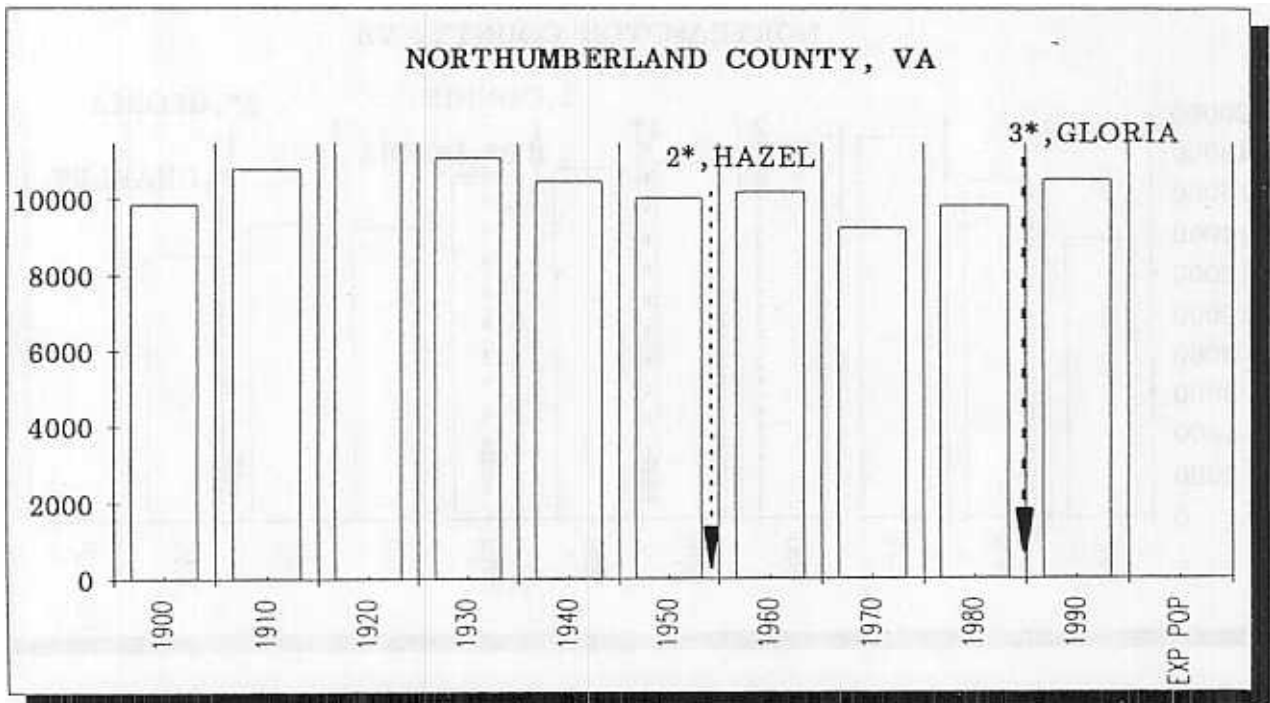
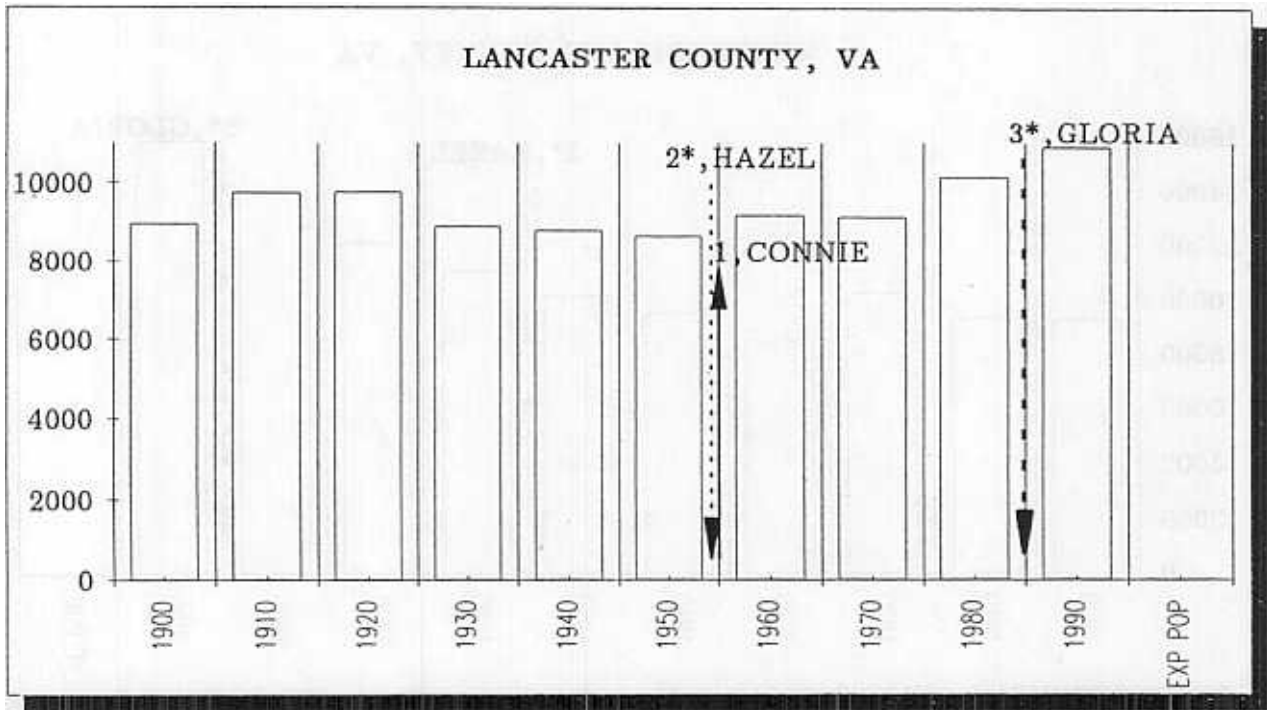
ISLE OF WIGHT COUNTY, VA

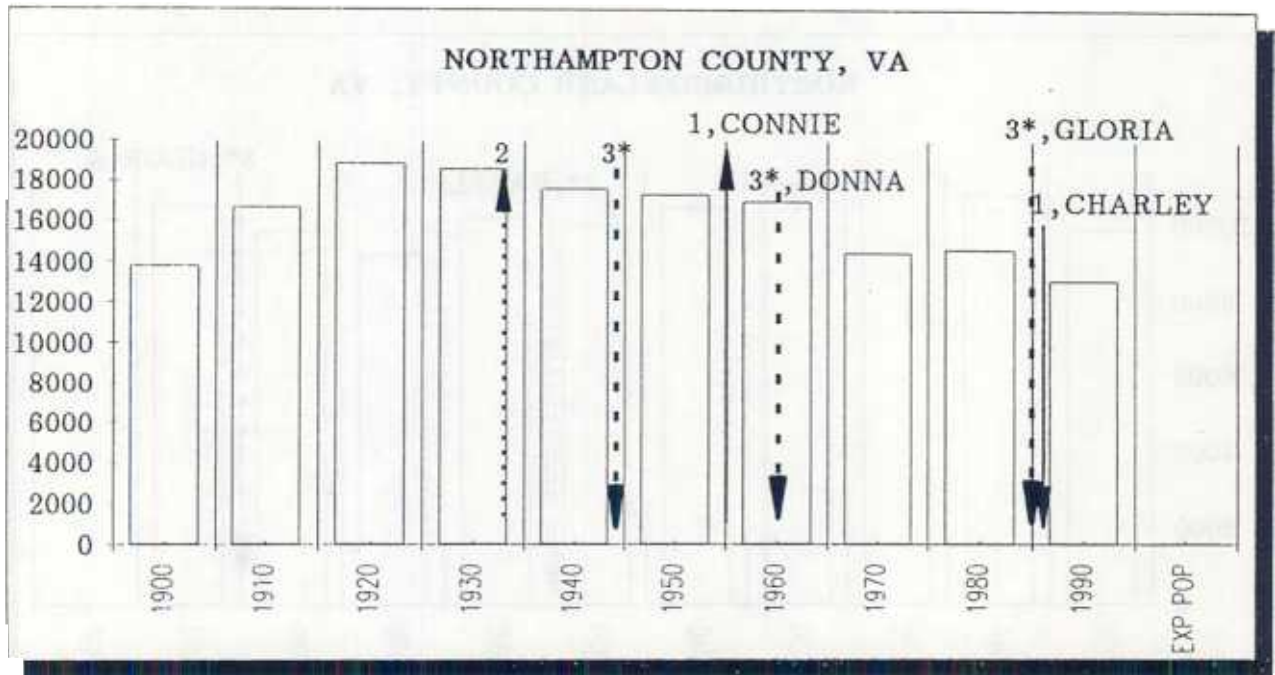
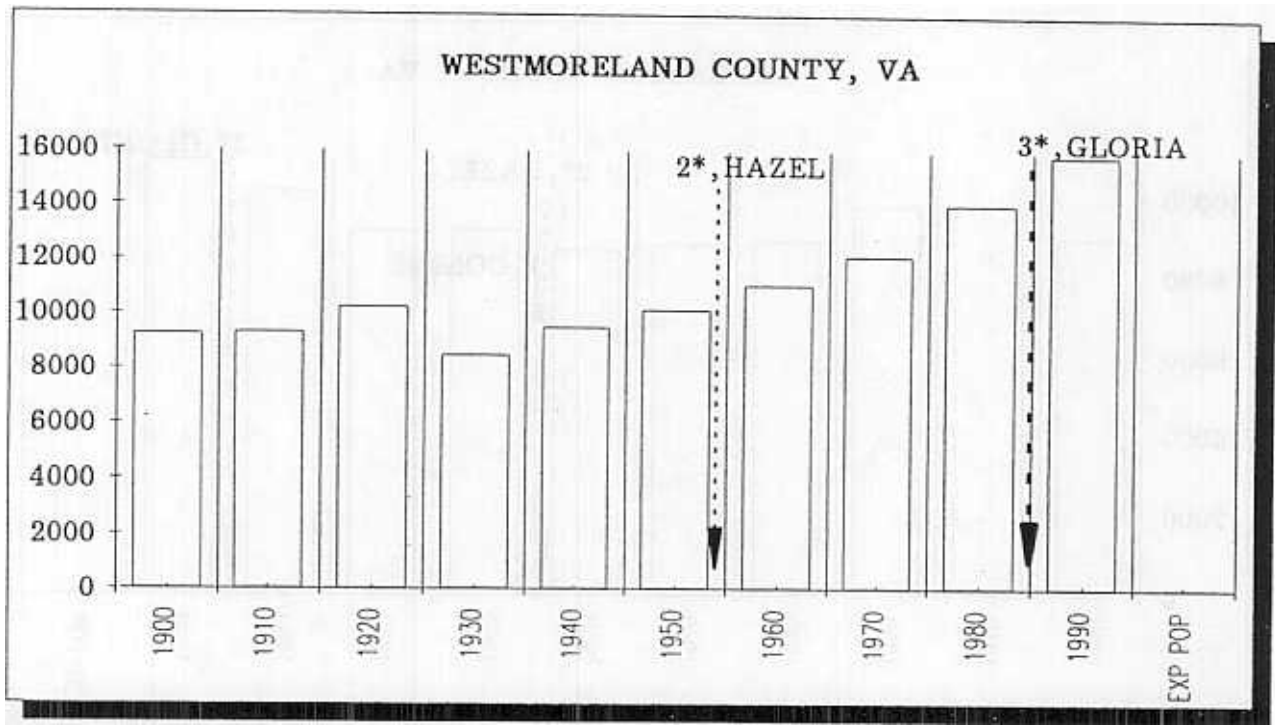




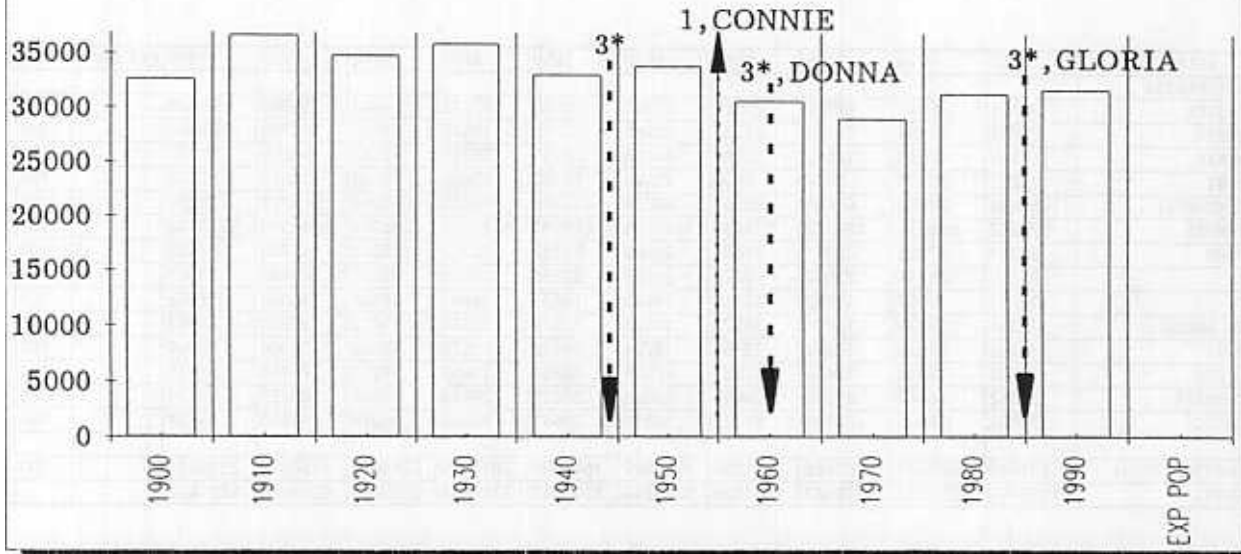








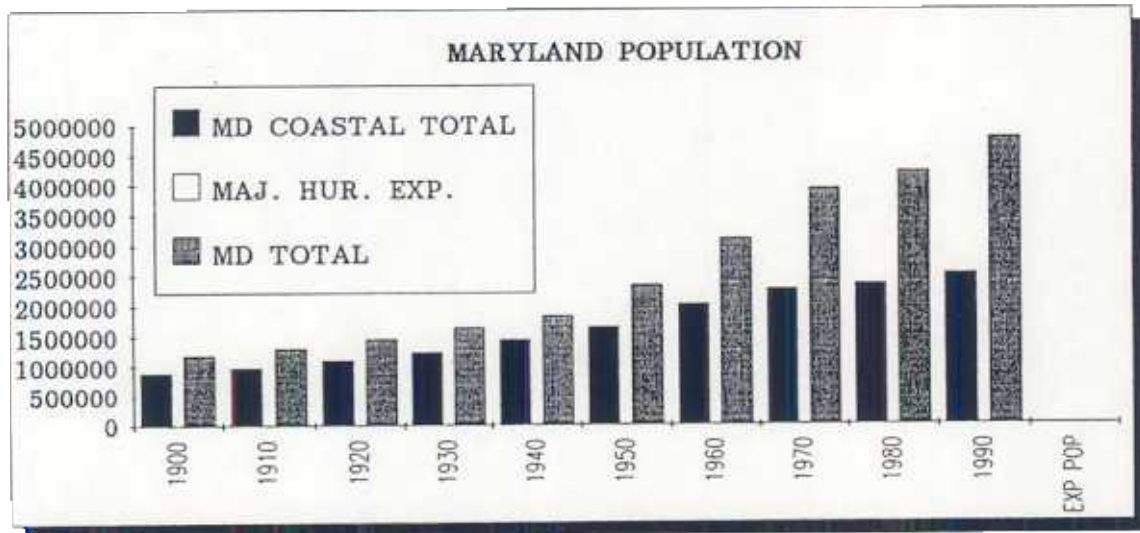
ACCOMACK COUNTY, VA

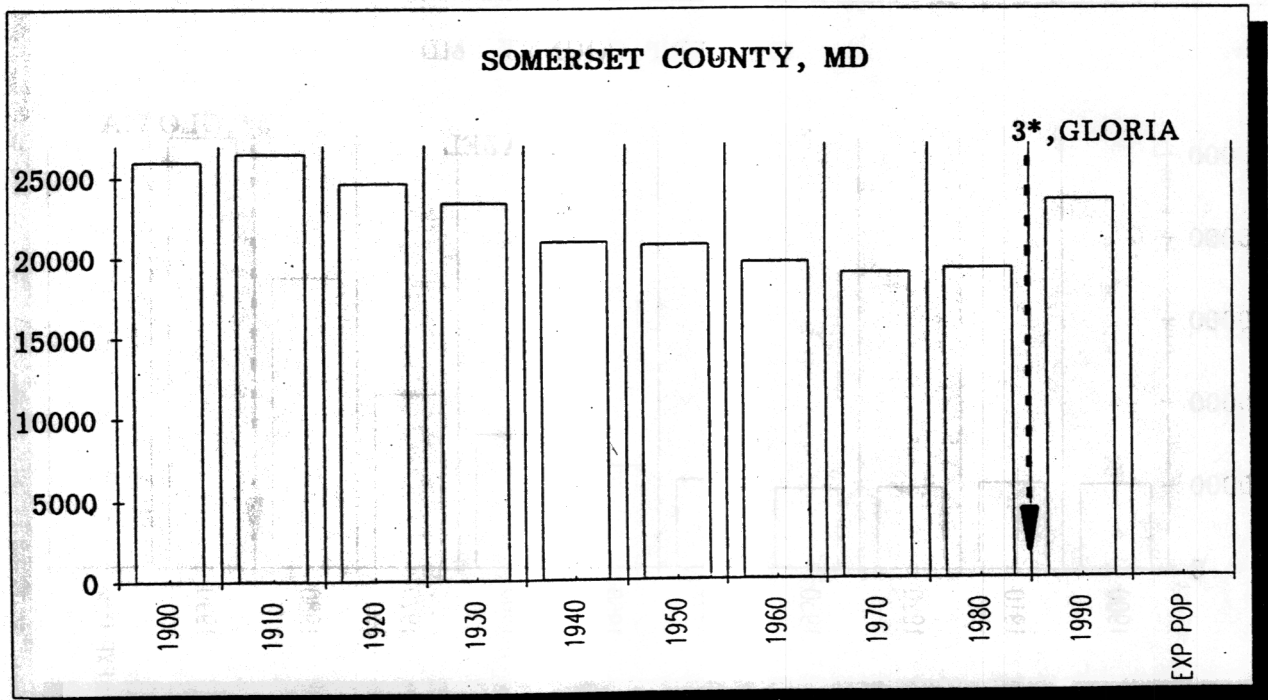
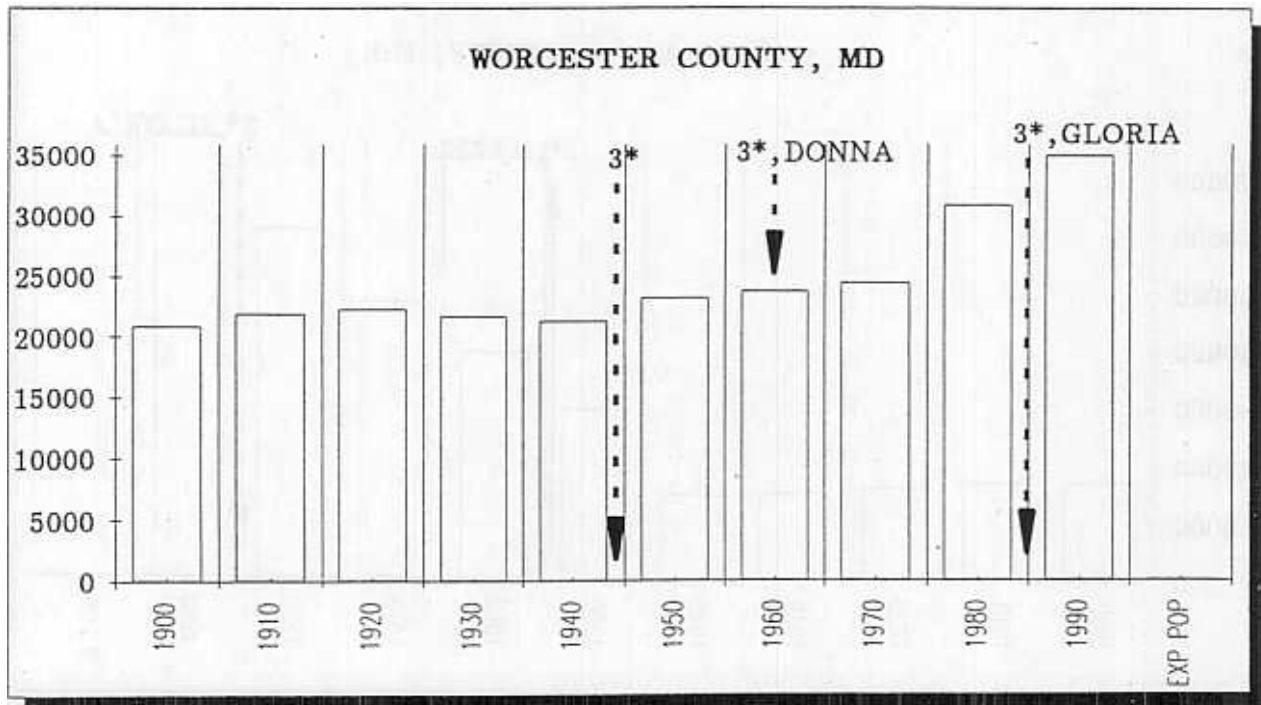


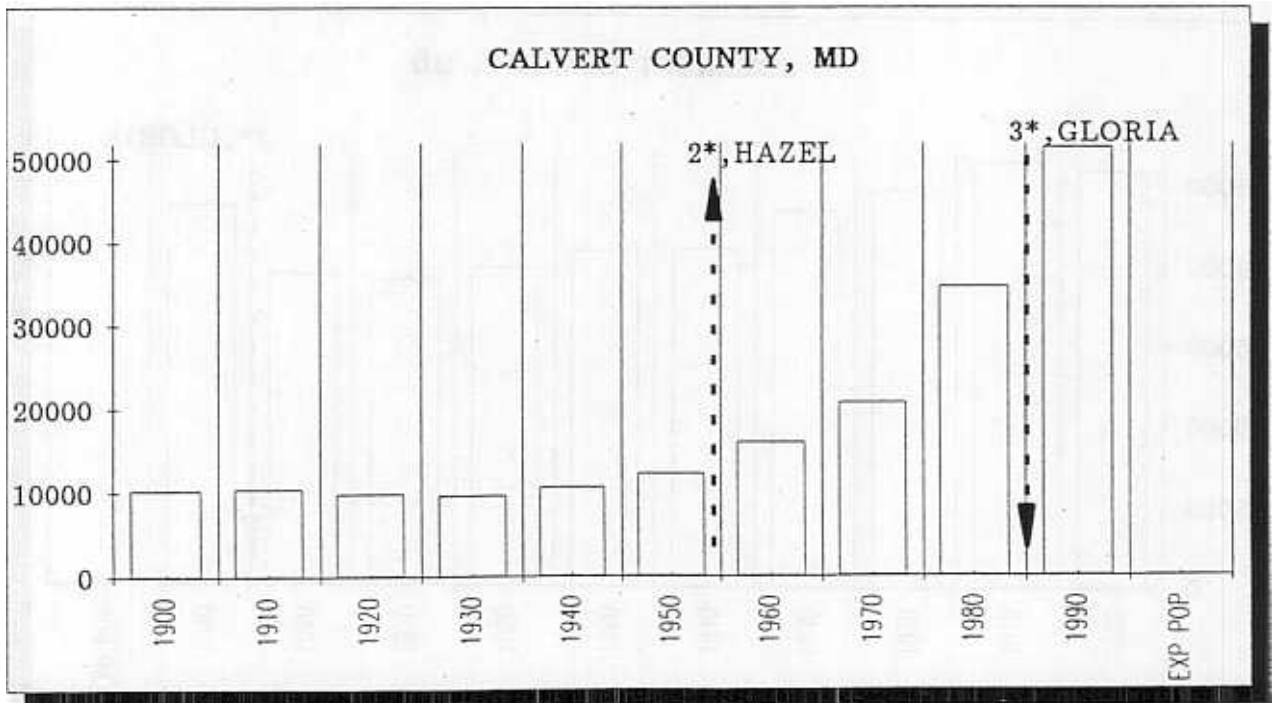
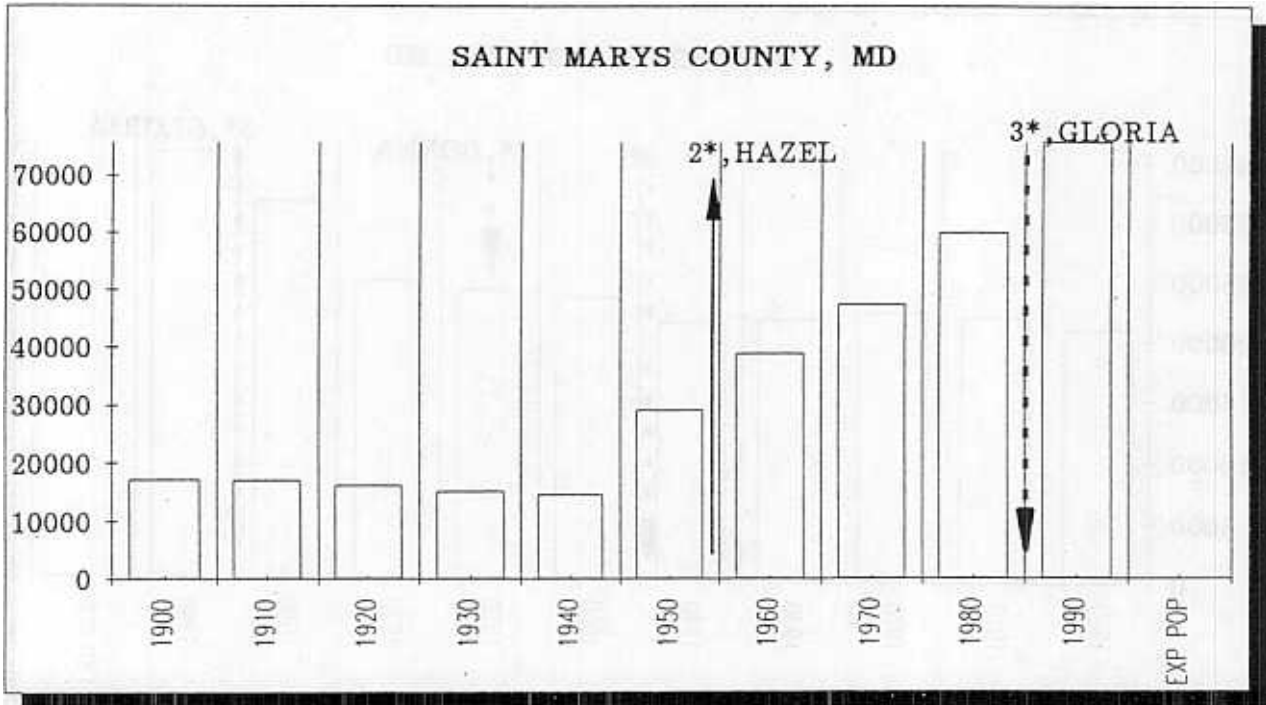
10 MARYLAND 14)

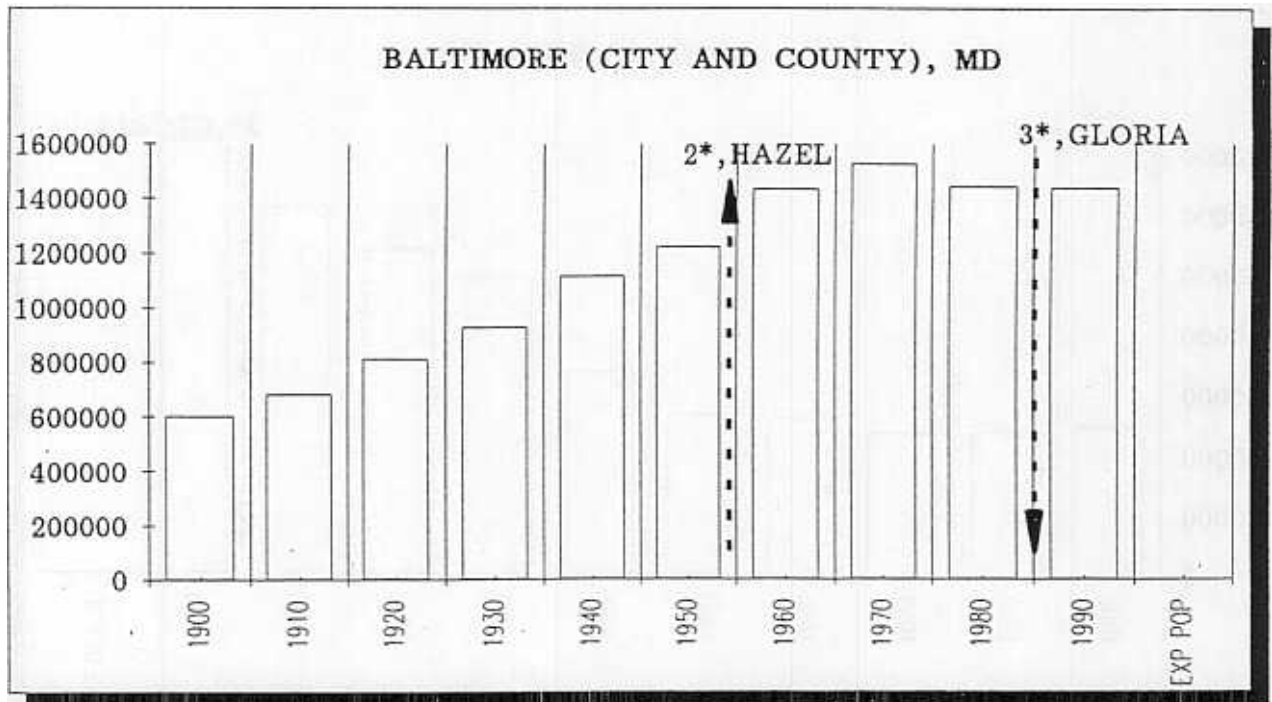
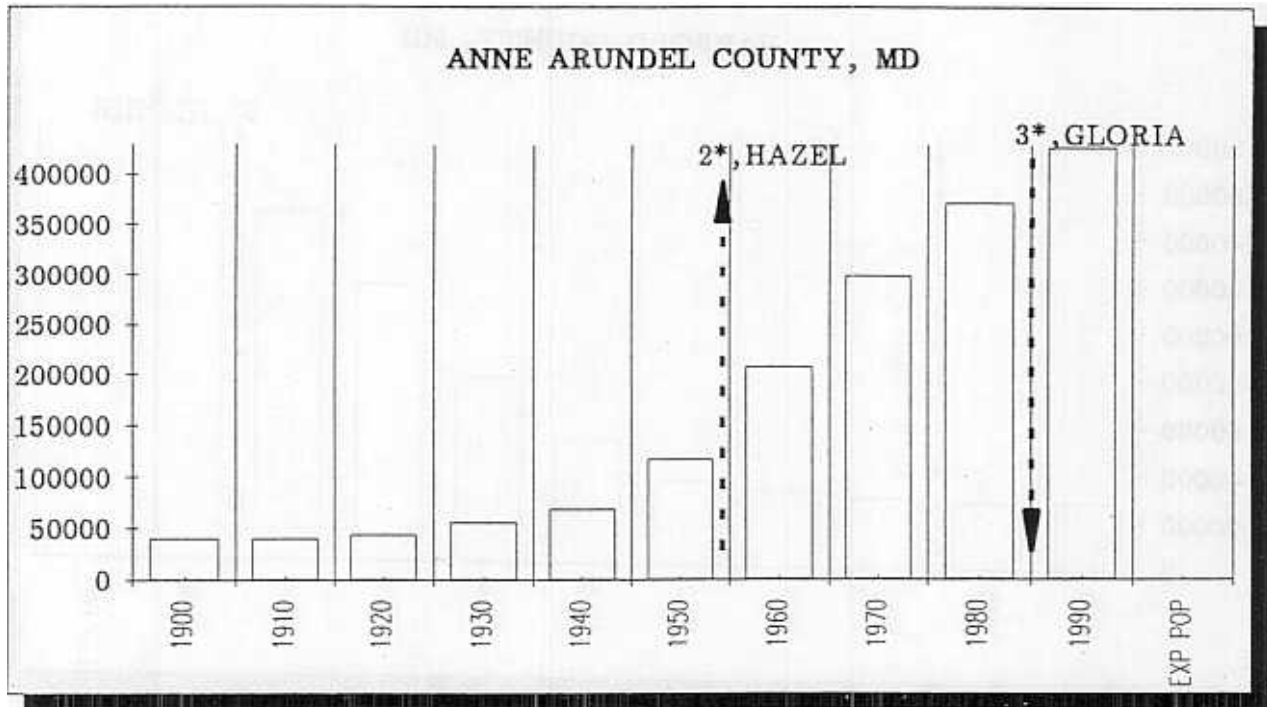
Worcester (Ocean City), Somerset, St. Marys, Calvert, Anne Arundel (Annapolis), Baltimore (includes Baltimore City), Harford, Cecil, Kent, Queen Annes, Talbot, Caroline, Dorchester, Wicomico.

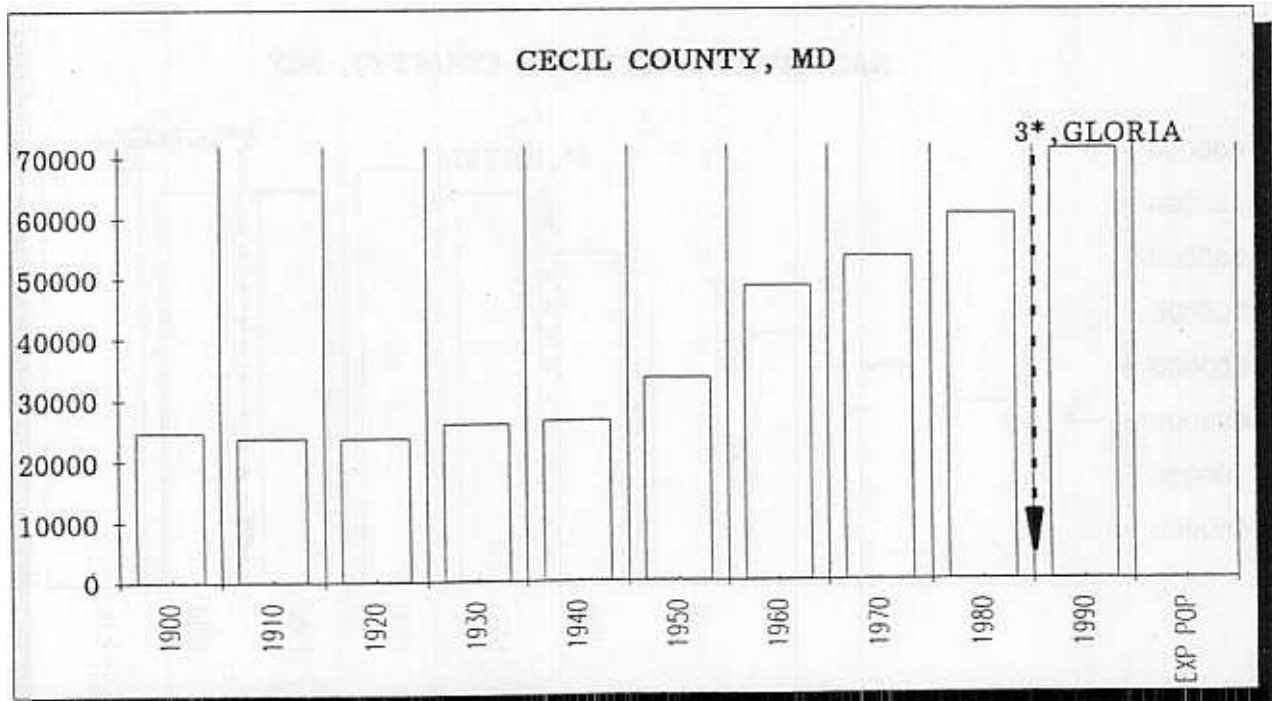
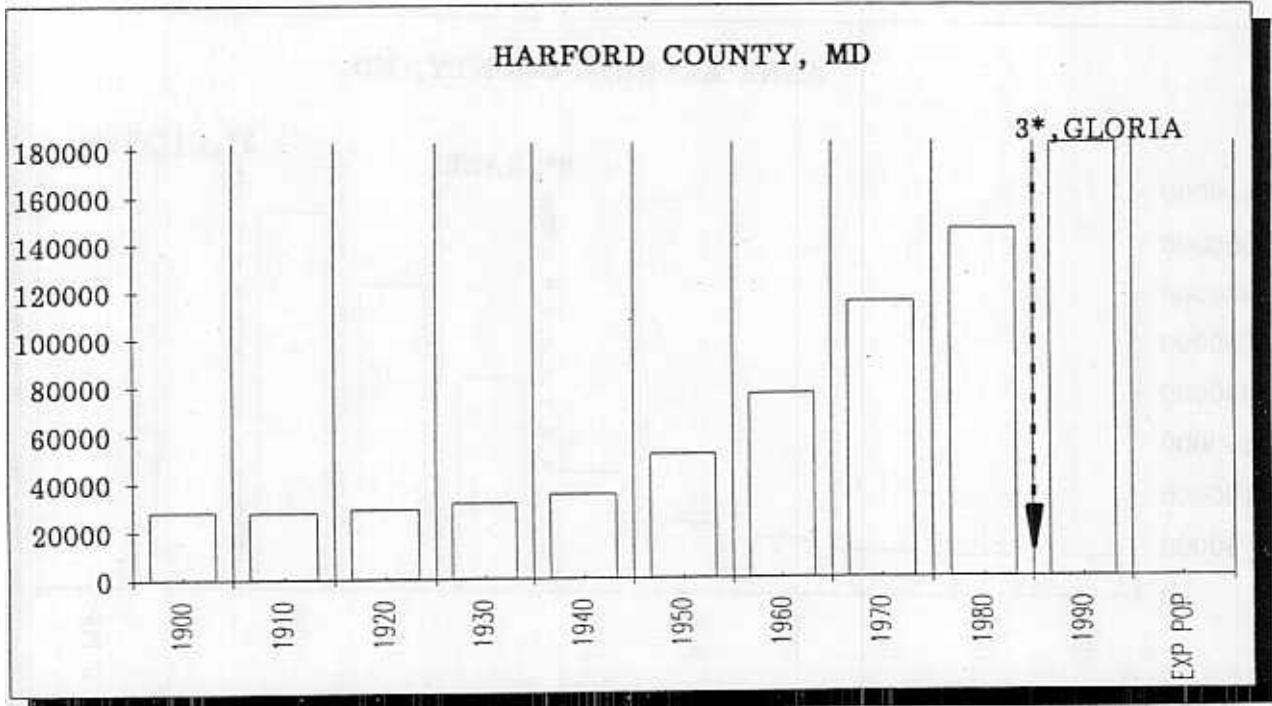
| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| WORCESTER | 20865 | 21841 | 22309 | 21624 | 21245 | 23148 | 23733 | 24442 | 30889 | 35028 | | 100 | |
| SOMERSET | 25923 | 26455 | 24602 | 23382 | 20965 | 20745 | 19623 | 18924 | 19188 | 23440 | | 100 | |
| ST MARYS | 17182 | 17030 | 16112 | 15189 | 14626 | 29111 | 38915 | 47388 | 59895 | 75974 | | 100 | |
| CALVERT | 10223 | 10325 | 9744 | 9528 | 10484 | 12100 | 15826 | 20682 | 34638 | 51372 | | 100 | |
| ANNE ARUNDEL | 39620 | 39553 | 43408 | 55167 | 68375 | 117392 | 206634 | 298042 | 370775 | 427239 | | 100 | |
| BALTIMORE | 599712 | 680834 | 808643 | 929439 | 1114925 | 1219981 | 1431452 | 1526196 | 1442390 | 1438148 | | | |
| HARFORD | 28269 | 27965 | 29291 | 31603 | 35060 | 51782 | 76722 | 115378 | 145930 | 182132 | | | |
| | 24662 | 23759 | 23612 | 25827 | 26407 | 33356 | 48408 | 53291 | 60430 | 71347 | | | |
| KENT | 18786 | 16957 | 15026 | 14242 | 13465 | 13677 | 15481 | 16146 | 16695 | 17842 | | | |
| QUEEN ANNES | 18364 | 16839 | 16001 | 14571 | 14476 | 14579 | 16569 | 18422 | 25508 | 33953 | | | |
| TALBOT | 20342 | 19620 | 18306 | 18583 | 18784 | 19428 | 21578 | 23682 | 25604 | 30549 | | | |
| CAROLINE | 16248 | 19216 | 18652 | 17387 | 17549 | 18234 | 19462 | 19781 | 23143 | 27035 | | | |
| DORCHESTER | 27962 | 28669 | 27895 | 26813 | 28006 | 27815 | 29666 | 29405 | 30623 | 30236 | | 100 | |
| | 22852 | 26815 | 28165 | 31229 | 34530 | 39641 | 49050 | 54236 | 64540 | 74339 | | 100 | |
| MD COASTAL TOTAL | 891010 | 975878 | 1101766 | 1234584 | 1438897 | 1640989 | 2013119 | 2266015 | 2350248 | 2518634 | 0 | 100 | |
| | 1188044 | 1295346 | 1449661 | 1631526 | 1821244 | 2343001 | 3100689 | 3923897 | 4216440 | 4781468 | | | |

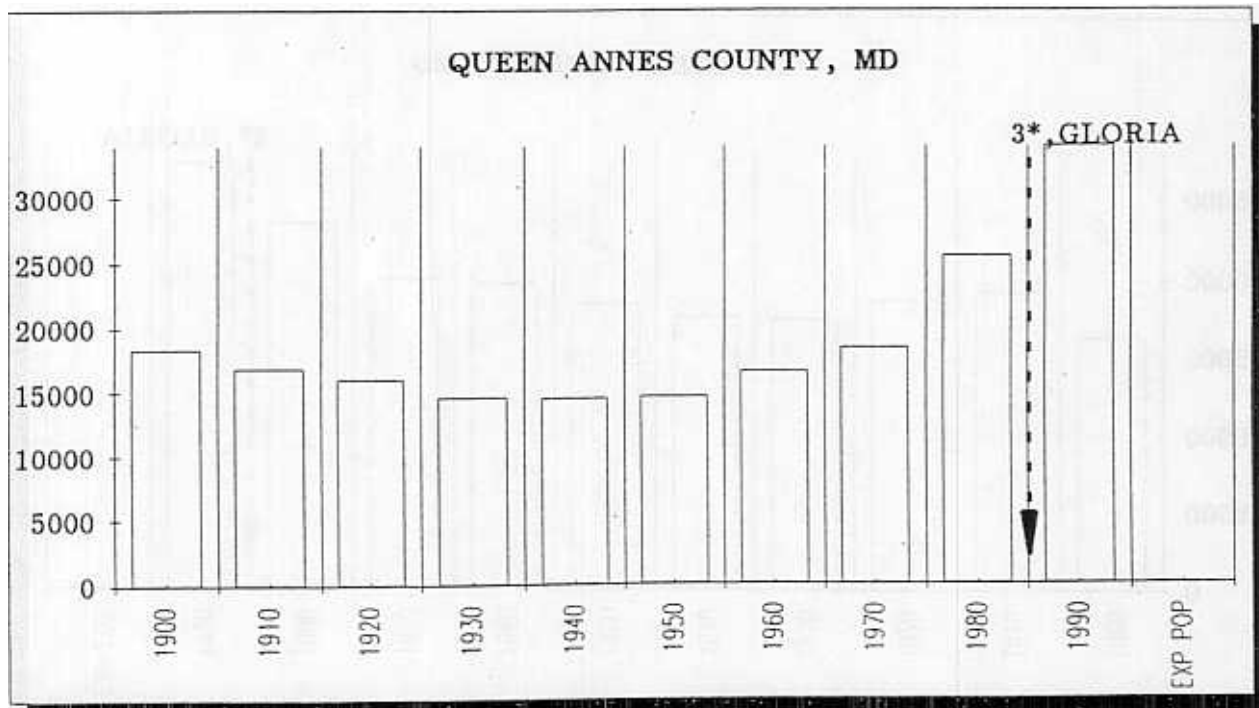
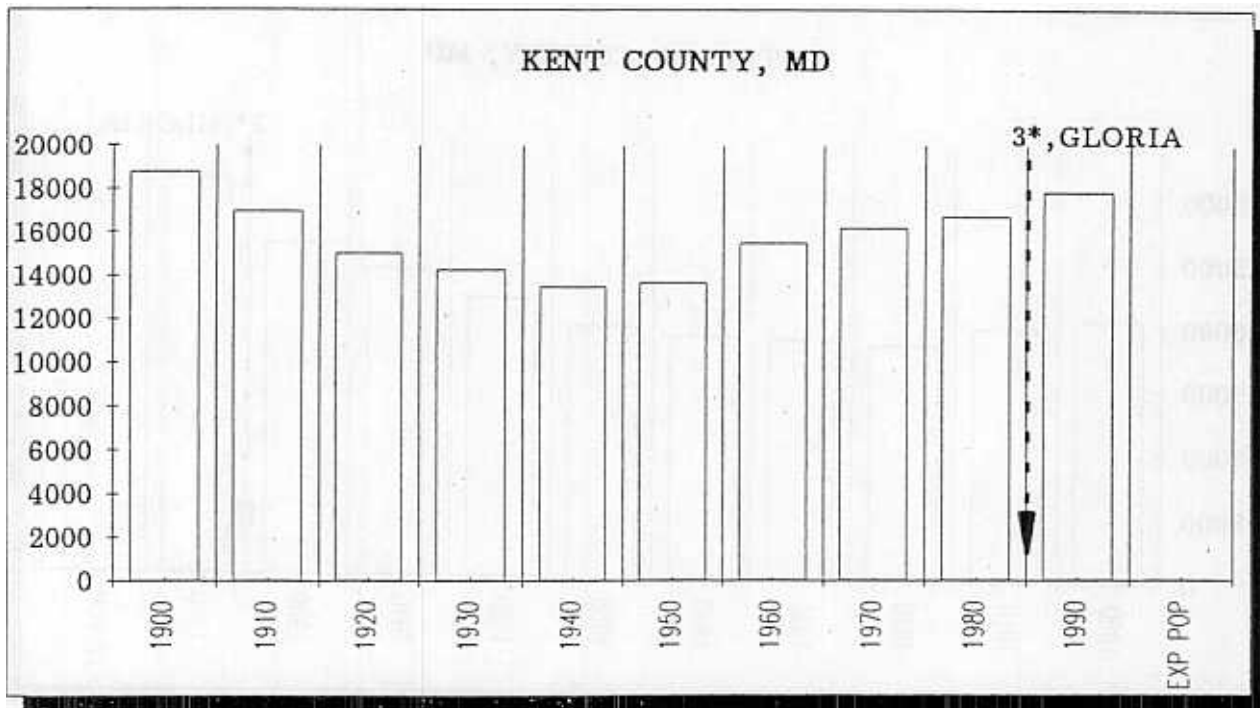


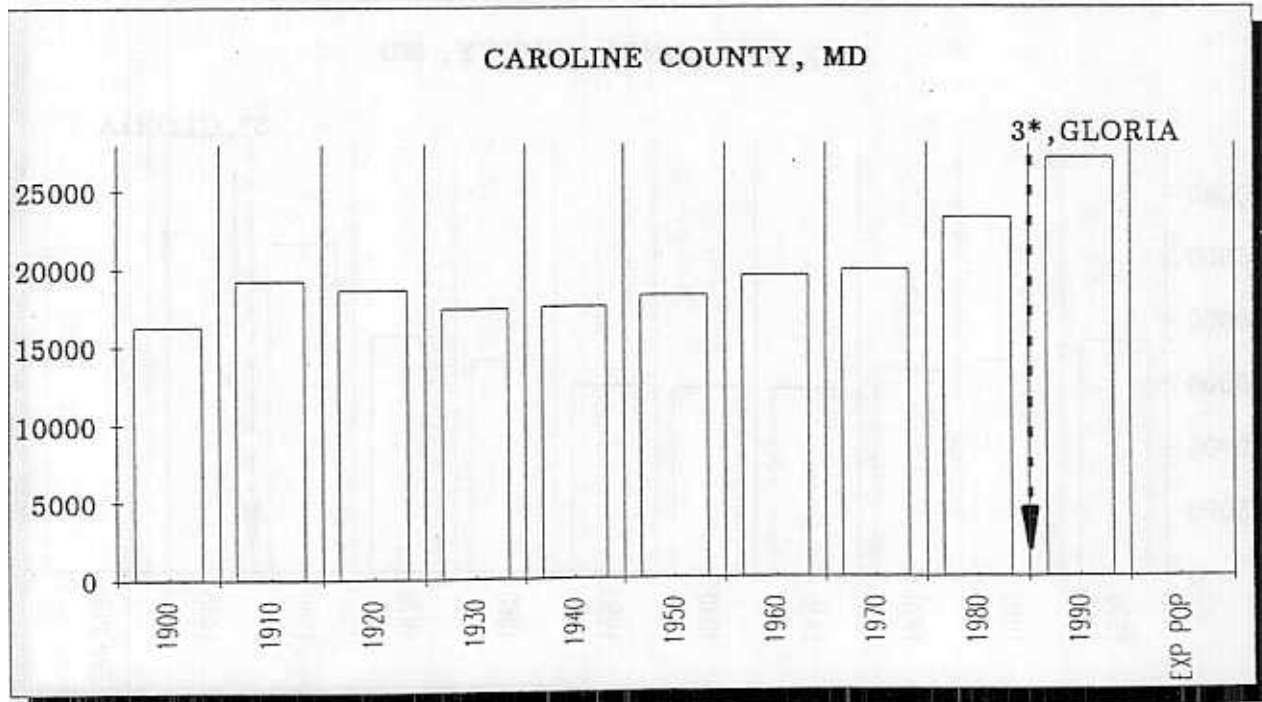
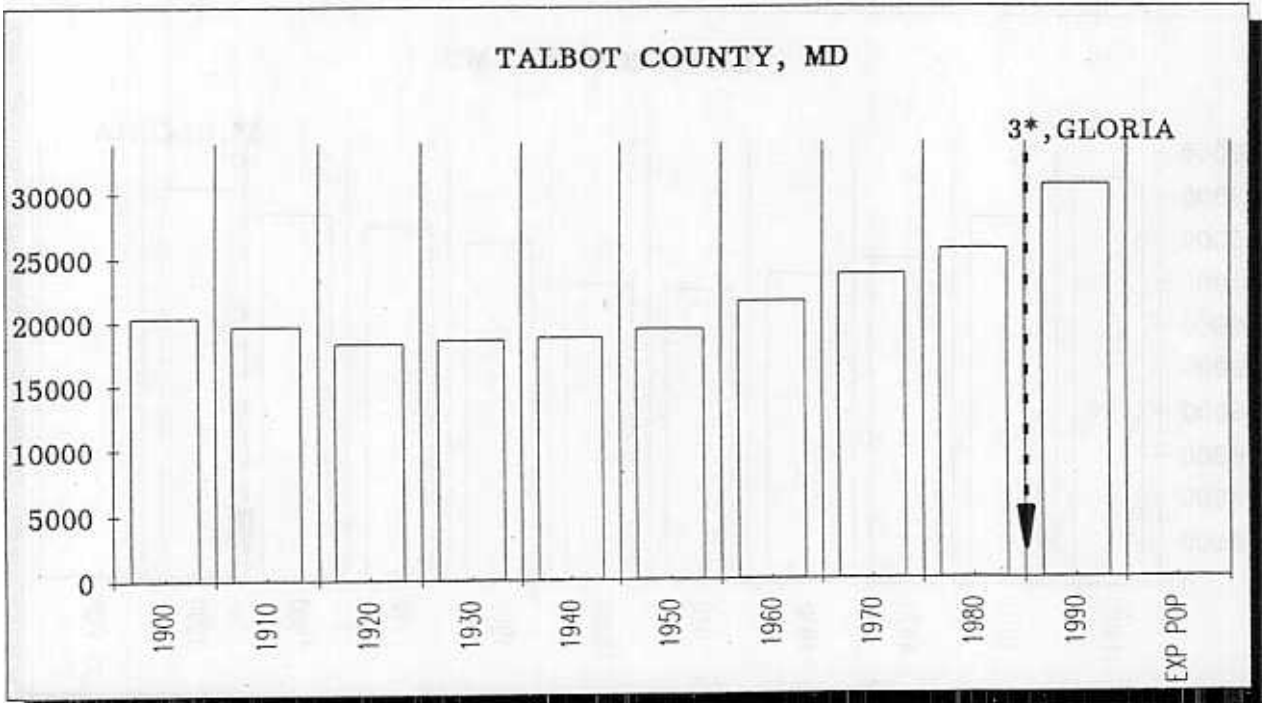


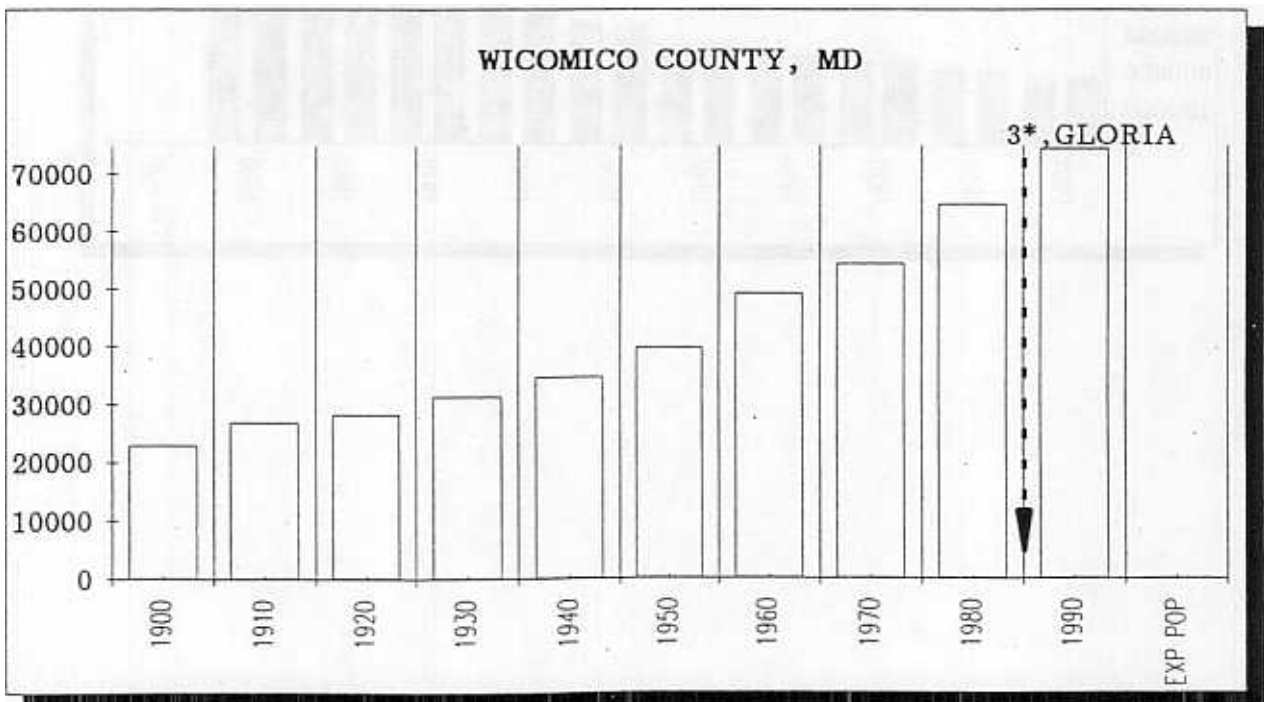
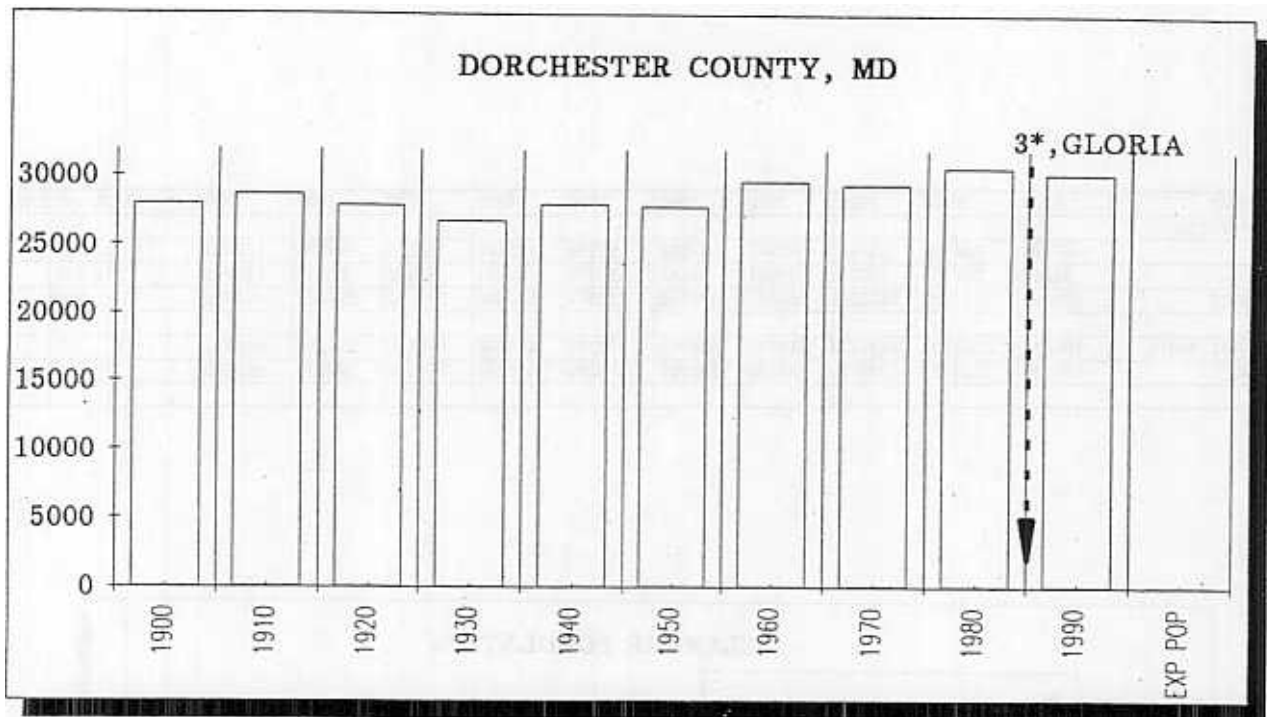








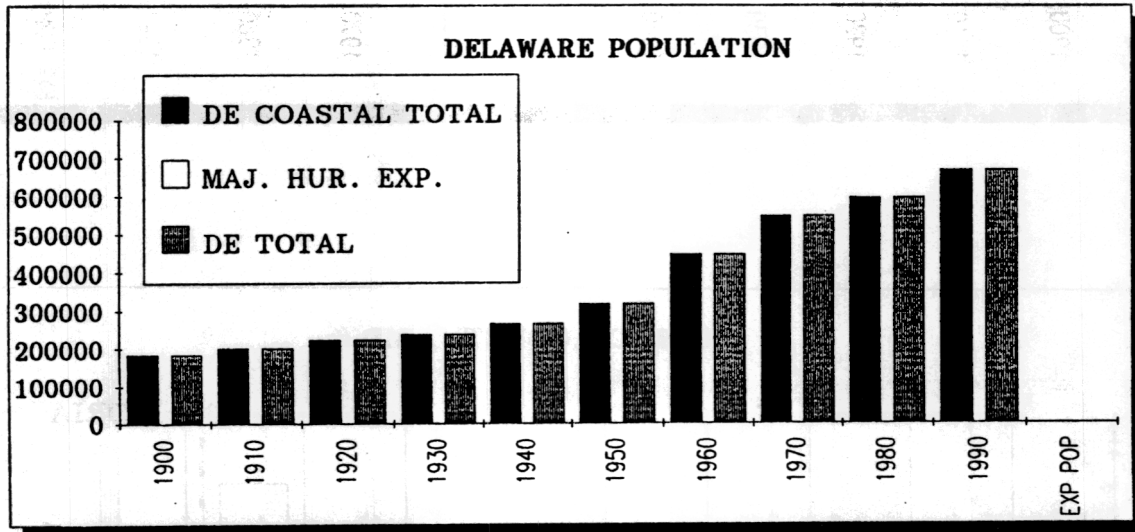


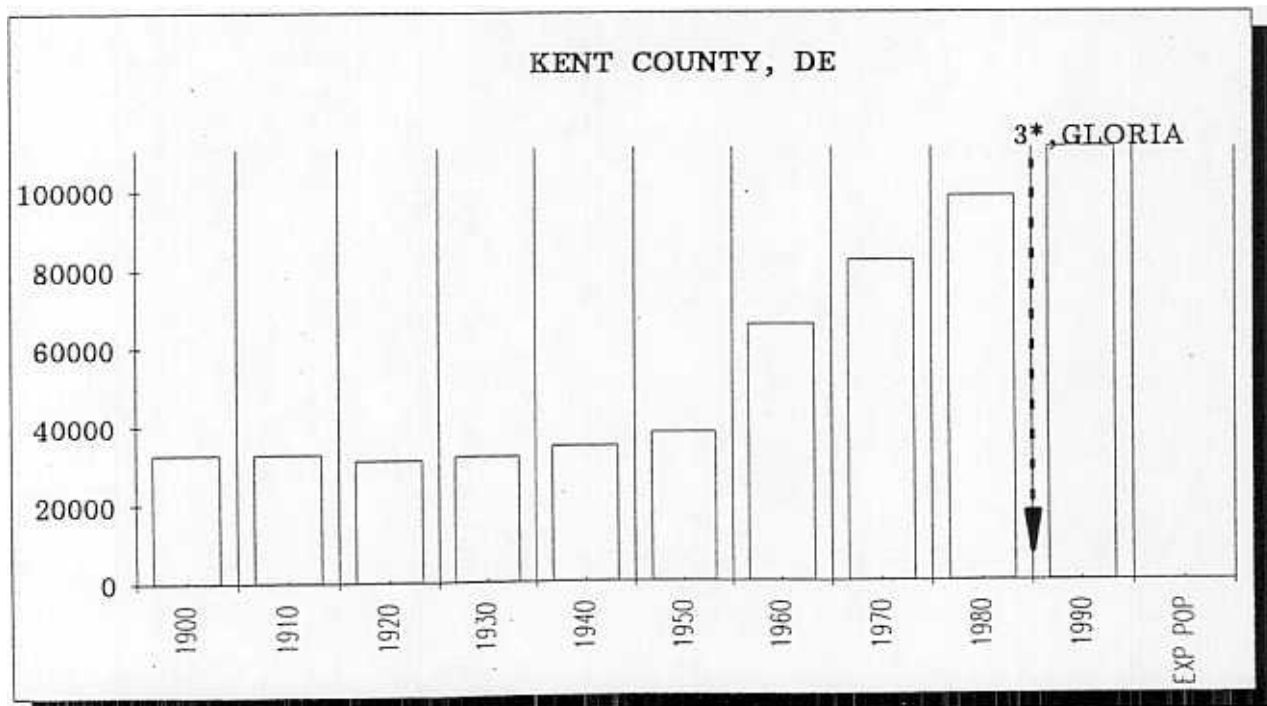
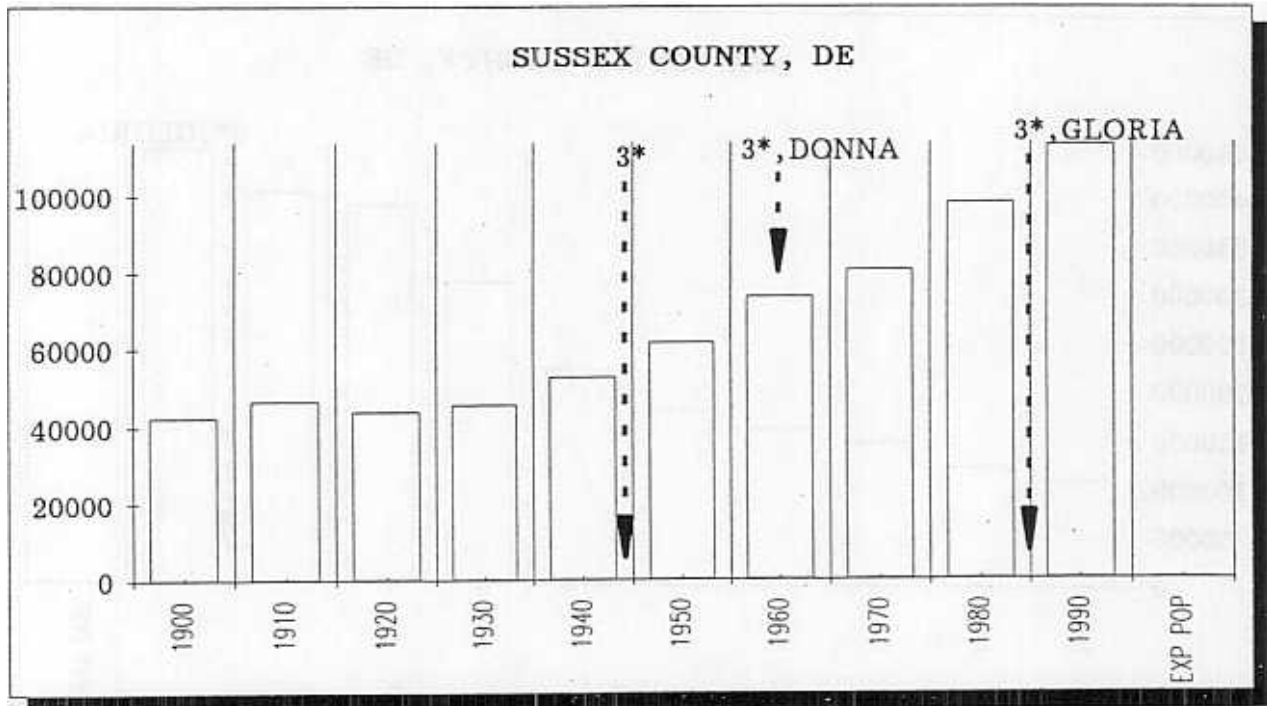


11. DELAWARE (3)

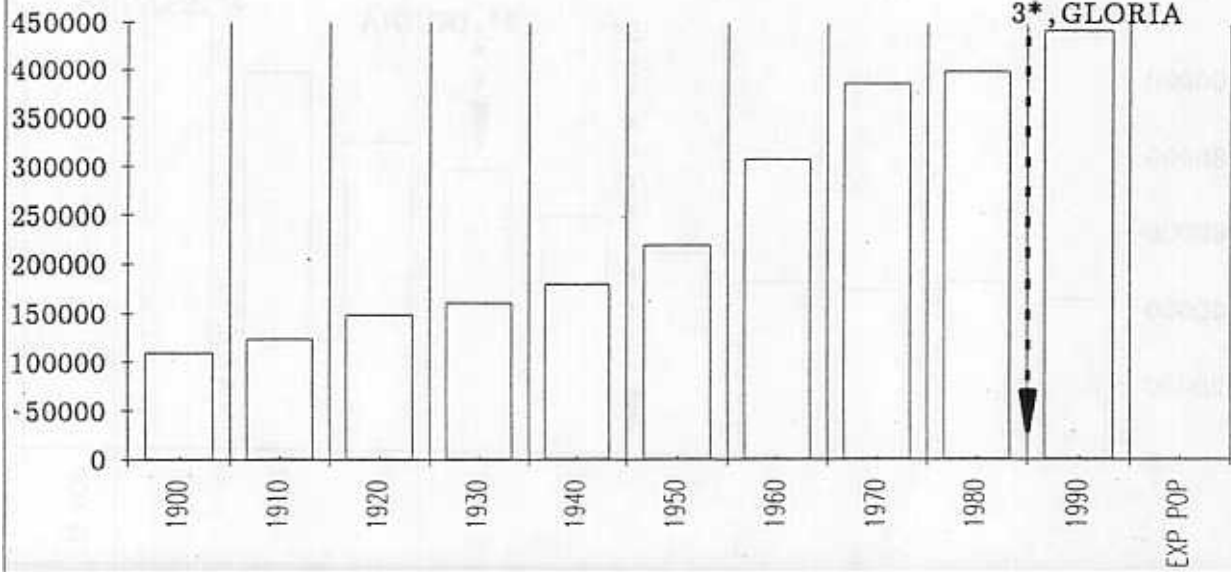
Sussex (Rehoboth Beach), Kent, New Castle (Wilmington)

| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| SUSSEX | 42276 | 46413 | 43741 | 45507 | 52502 | 61336 | 73195 | 80356 | 98004 | 113229 | | 100 | |
| KENT | 32762 | 32721 | 31023 | 31841 | 34441 | 37870 | 65651 | 81892 | 98219 | 110993 | | 100 | |
| NEW CASTLE | 109697 | 123188 | 148239 | 161032 | 179562 | 218879 | 307446 | 385856 | 399002 | 441946 | | 100 | |
| DE COASTAL TOTAL | 184735 | 202322 | 223003 | 238380 | 266505 | 318085 | 446292 | 548104 | 595225 | 666168 | 0 | 100 | |
| DE TOTAL | 184735 | 202322 | 223003 | 238380 | 266505 | 318085 | 446292 | 548104 | 595225 | 666168 | | | |





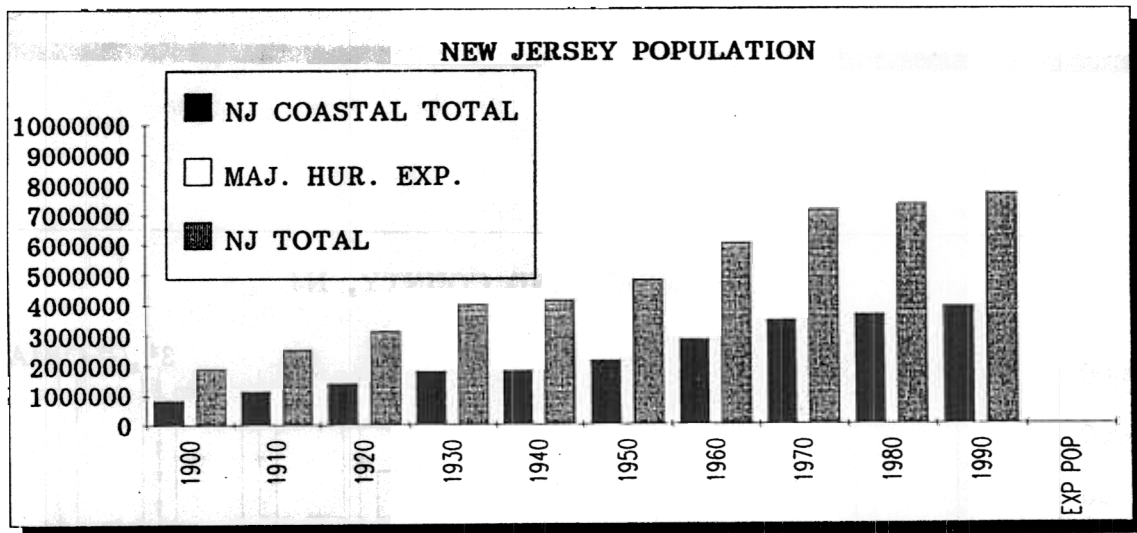
NEW CASTLE COUNTY, DE

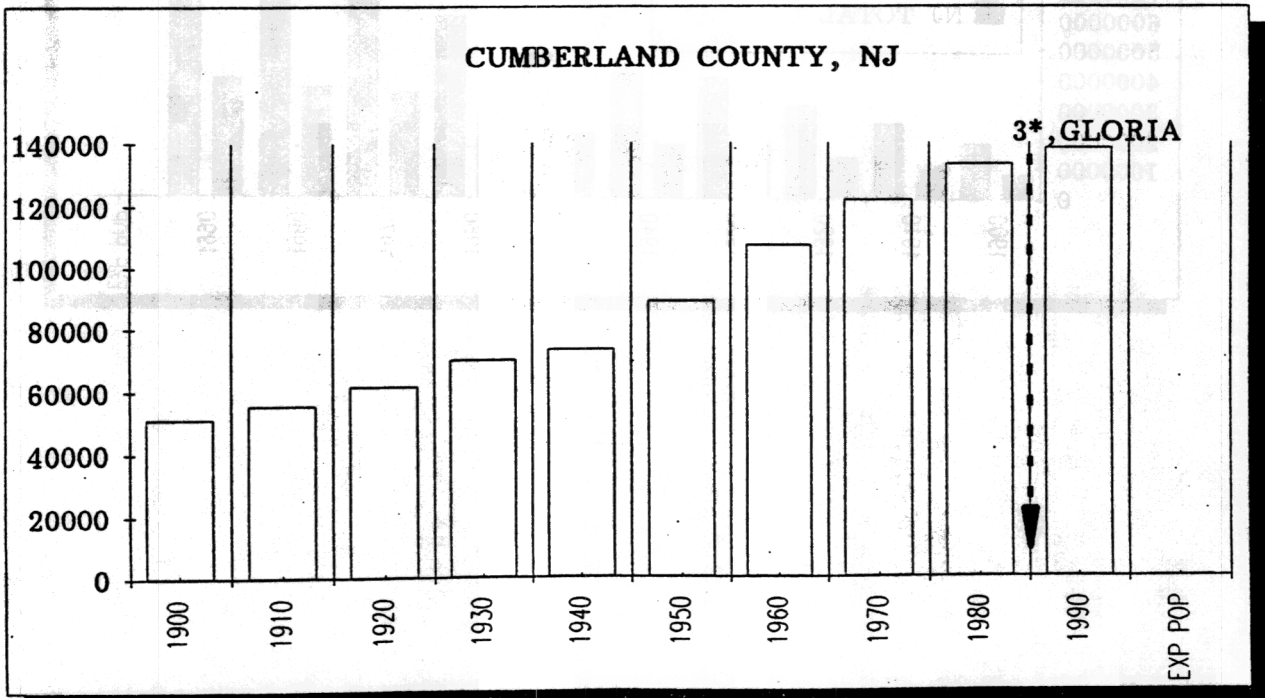
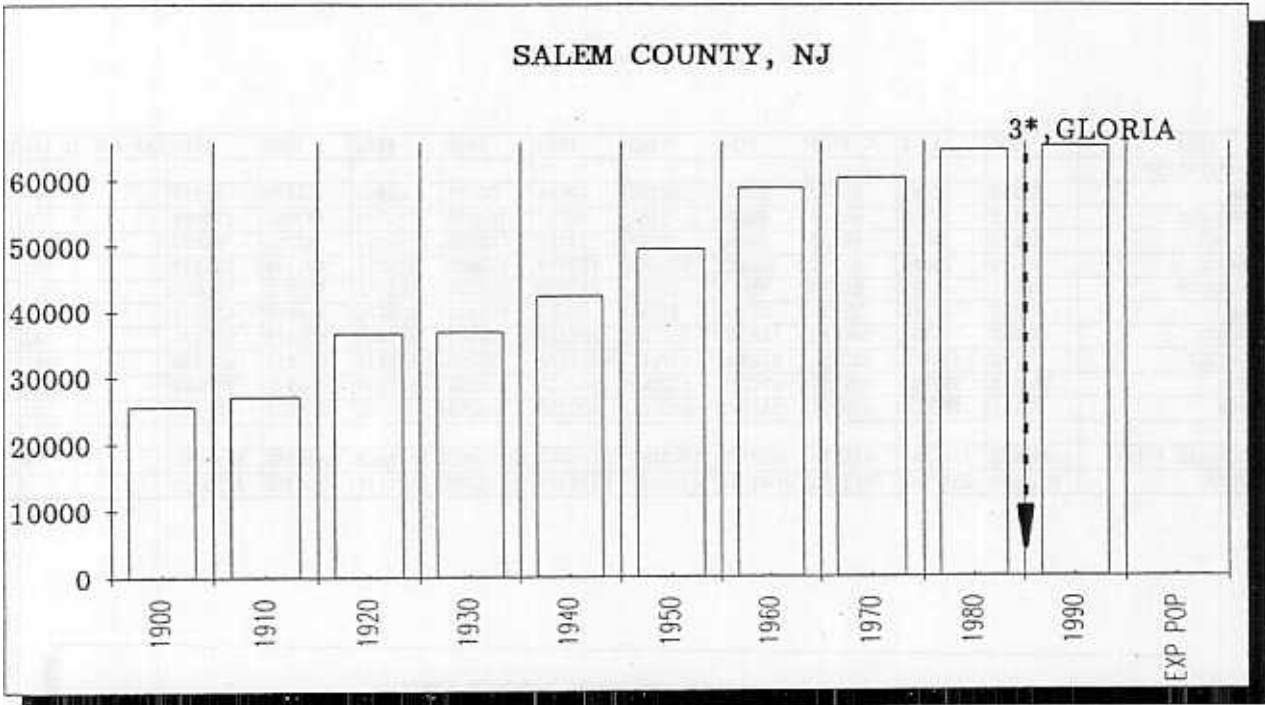


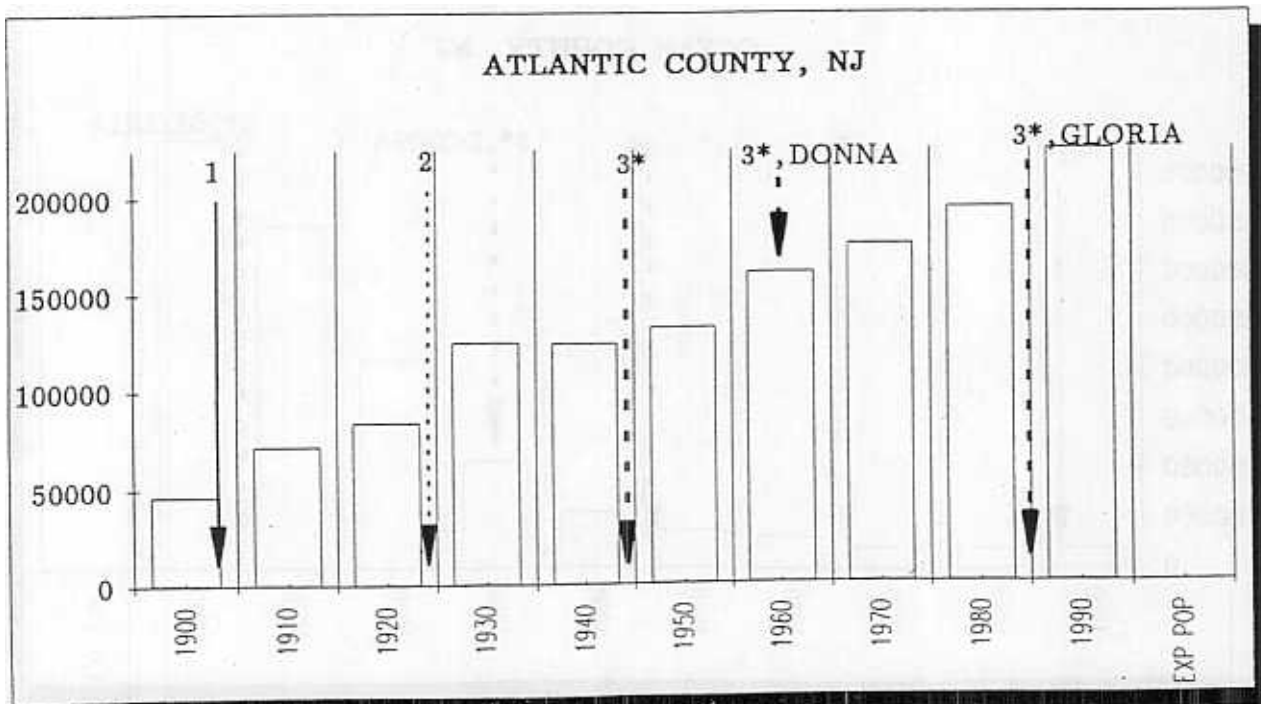
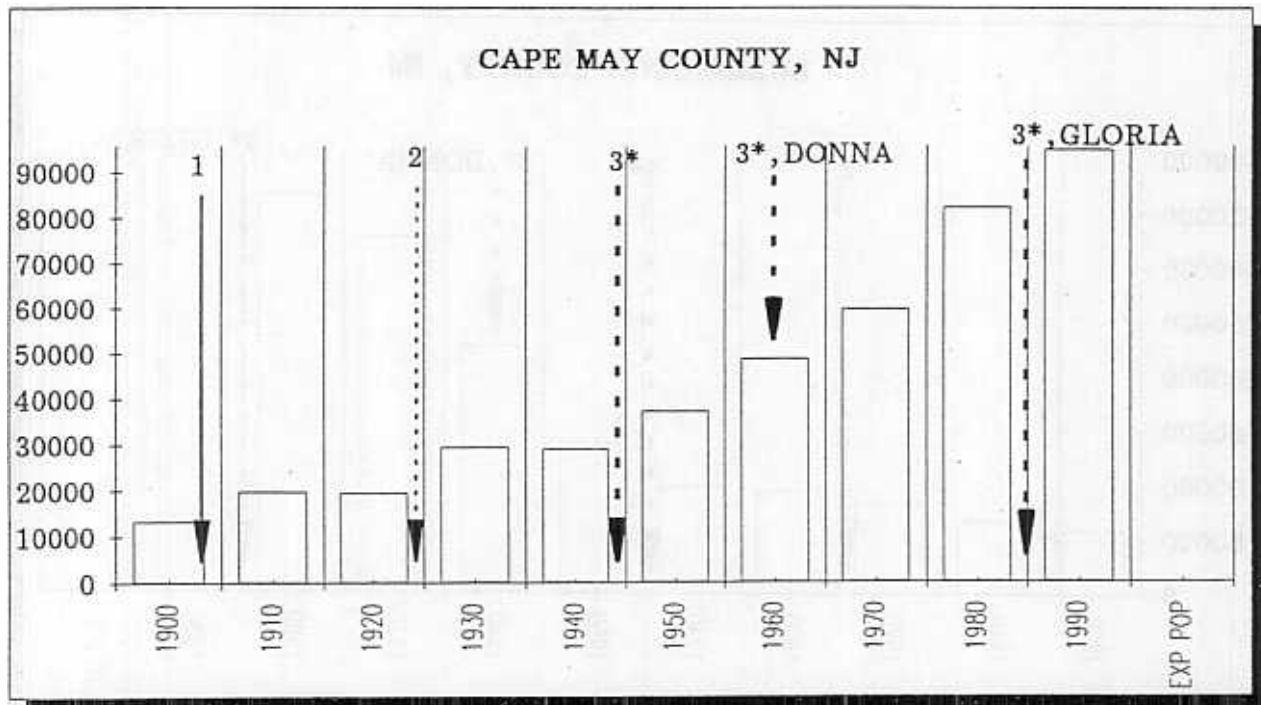
12. NEW JERSEY 10)

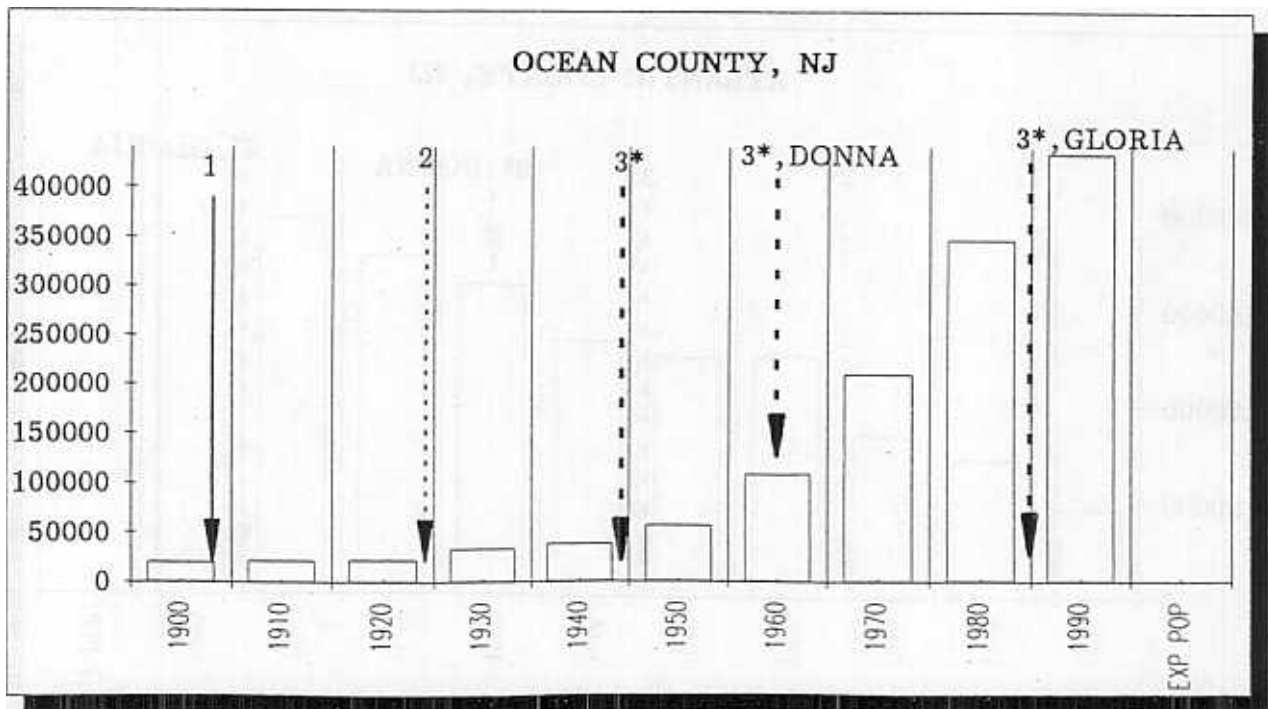
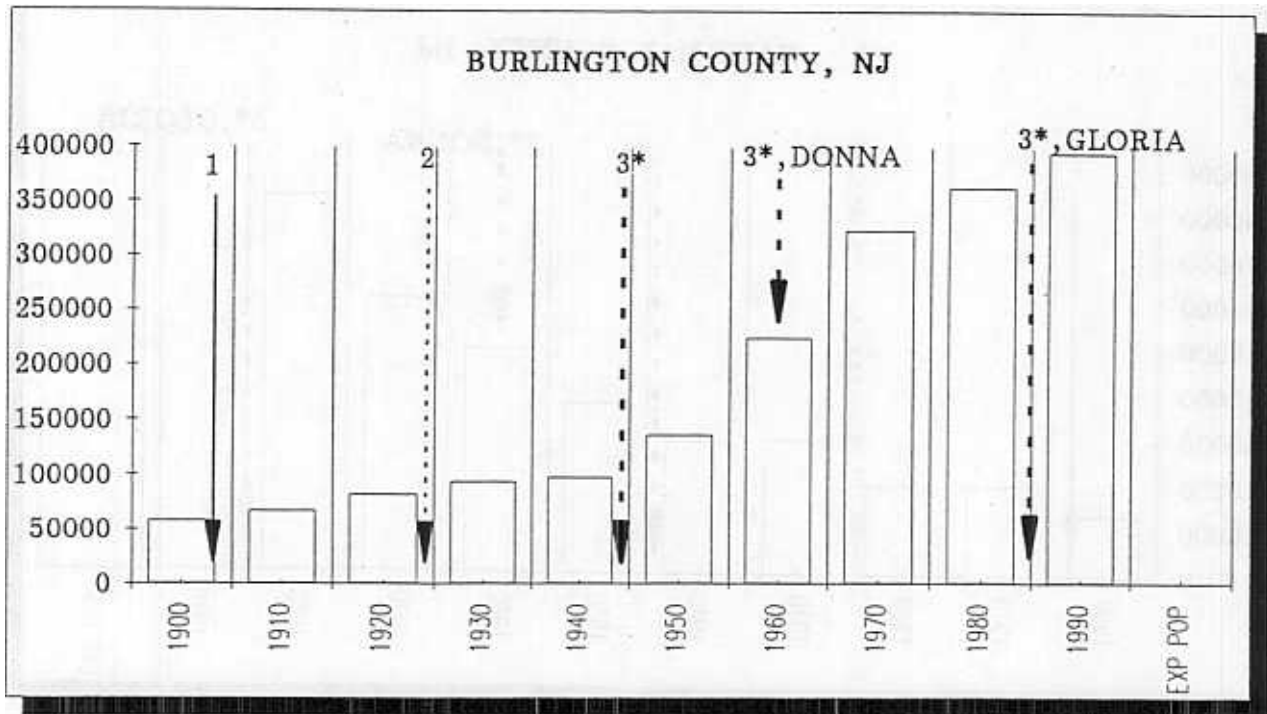
Salem, Cumberland, Cape May (Ocean City), Atlantic (Atlantic City), Burlington, Ocean, Monmouth (Asbury Park), Middlesex (Perth Amboy), Hudson (Jersey City), Bergen.

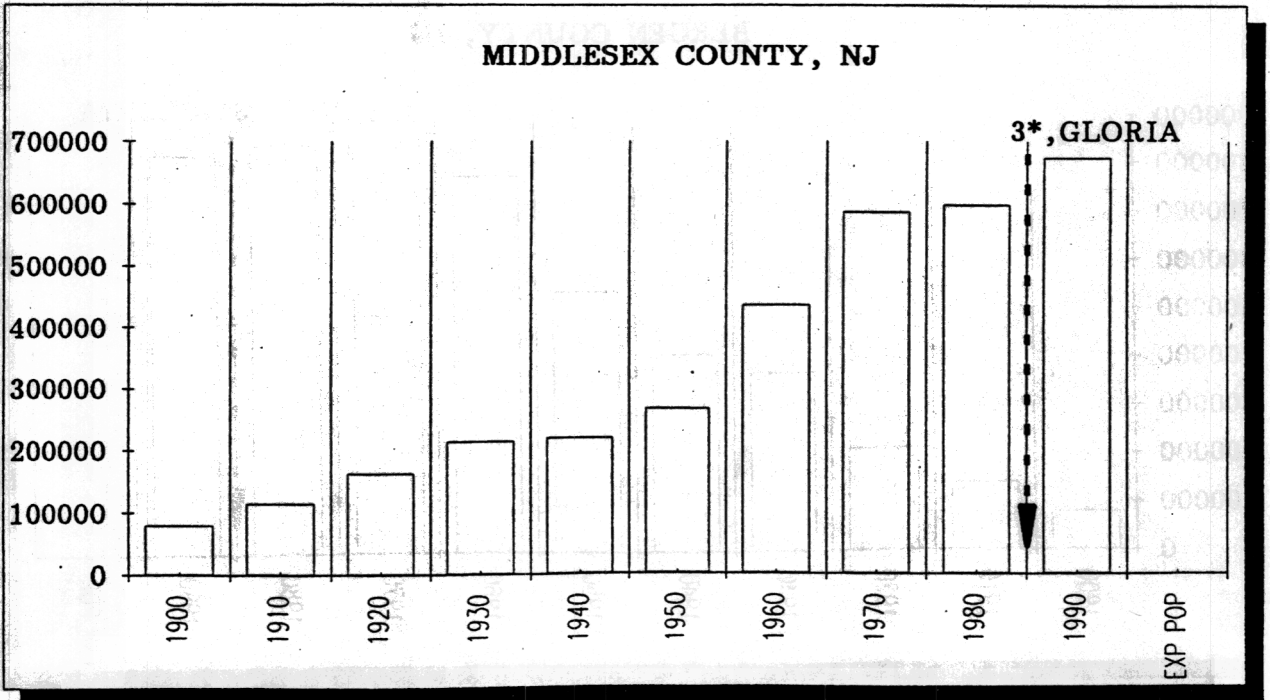
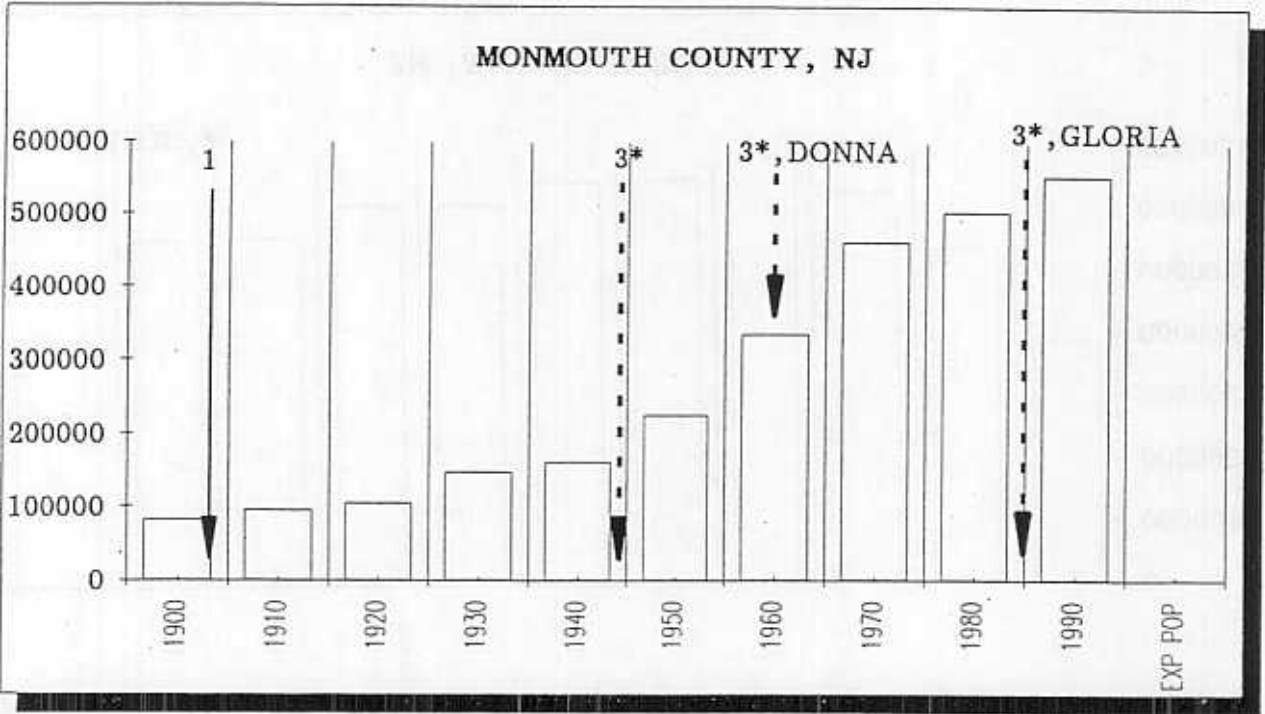
| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| SALEM | 25530 | 26999 | 36572 | 36834 | 42274 | 49508 | 58711 | 60346 | 64676 | 65294 | | 100 | |
| CUMBERLAND | 51193 | 55153 | 61348 | 69895 | 73184 | 88597 | 106850 | 121374 | 132866 | 138053 | | 100 | |
| CAPE MAY | 13201 | 19745 | 19460 | 29486 | 28919 | 37131 | 48555 | 59554 | 82266 | 95089 | | 100 | |
| ATLANTIC | 46402 | 71894 | 83914 | 124823 | 124066 | 132399 | 160880 | 175043 | 194119 | 224327 | | 100 | |
| BURLINGTON | 58241 | 66565 | 81770 | 93541 | 97013 | 135910 | 224499 | 323132 | 362542 | 395066 | | 100 | |
| OCEAN | 19747 | 21318 | 22155 | 33069 | 37706 | 56622 | 108241 | 208470 | 346038 | 433203 | | 100 | |
| MONMOUTH | 82057 | 94734 | 104925 | 147209 | 161238 | 225327 | 334401 | 461849 | 503173 | 553124 | | 100 | |
| MIDDLESEX | 79762 | 114426 | 162334 | 212208 | 217077 | 264872 | 433856 | 583813 | 595893 | 671780 | | 100 | |
| HUDSON | 386048 | 537231 | 629154 | 690730 | 652040 | 647437 | 610734 | 607839 | 556972 | 553099 | | 100 | |
| BERGEN | 78441 | 138002 | 210703 | 369977 | 409646 | 539139 | 780255 | 897148 | 845385 | 825380 | | 100 | |
| NJ COASTAL TOTAL | 840622 | 1146067 | 1412335 | 1807772 | 1843163 | 2176942 | 2866982 | 3498568 | 3683930 | 3954415 | 0 | 100 | |
| NJ TOTAL | 1883669 | 2537167 | 3155900 | 4041334 | 4160165 | 4835329 | 6066782 | 7171112 | 7364158 | 7730188 | | | |

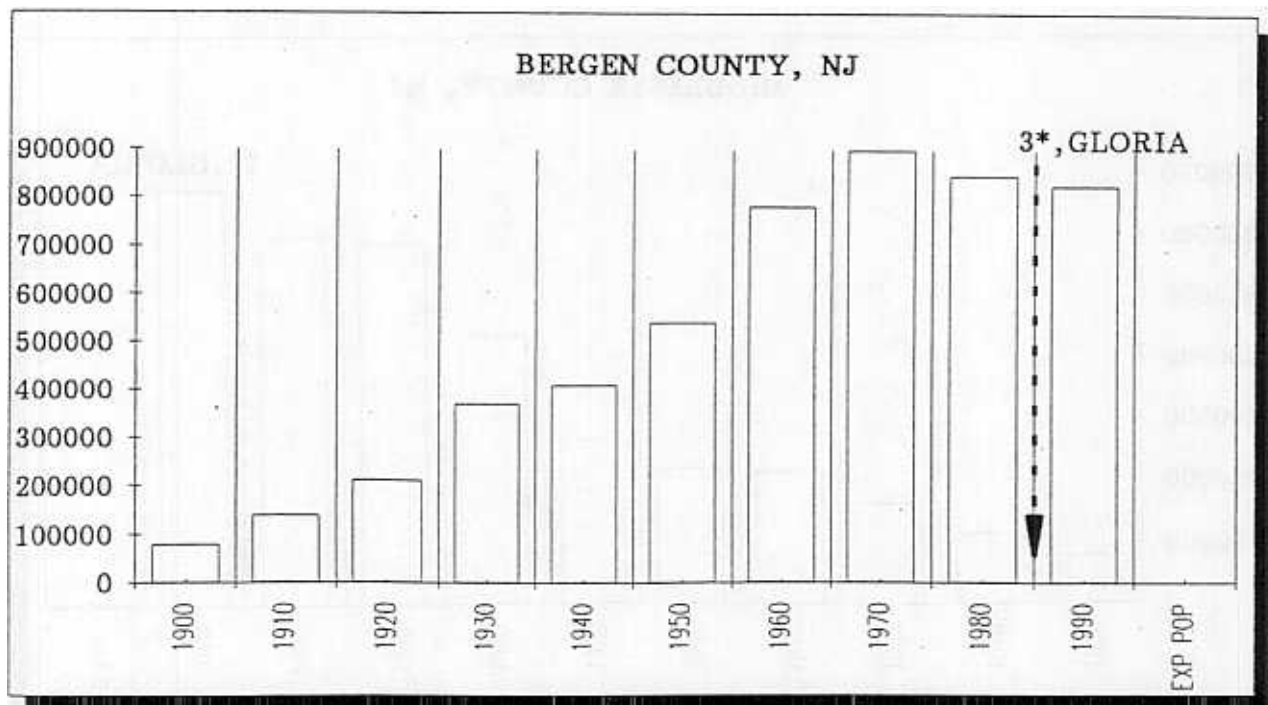
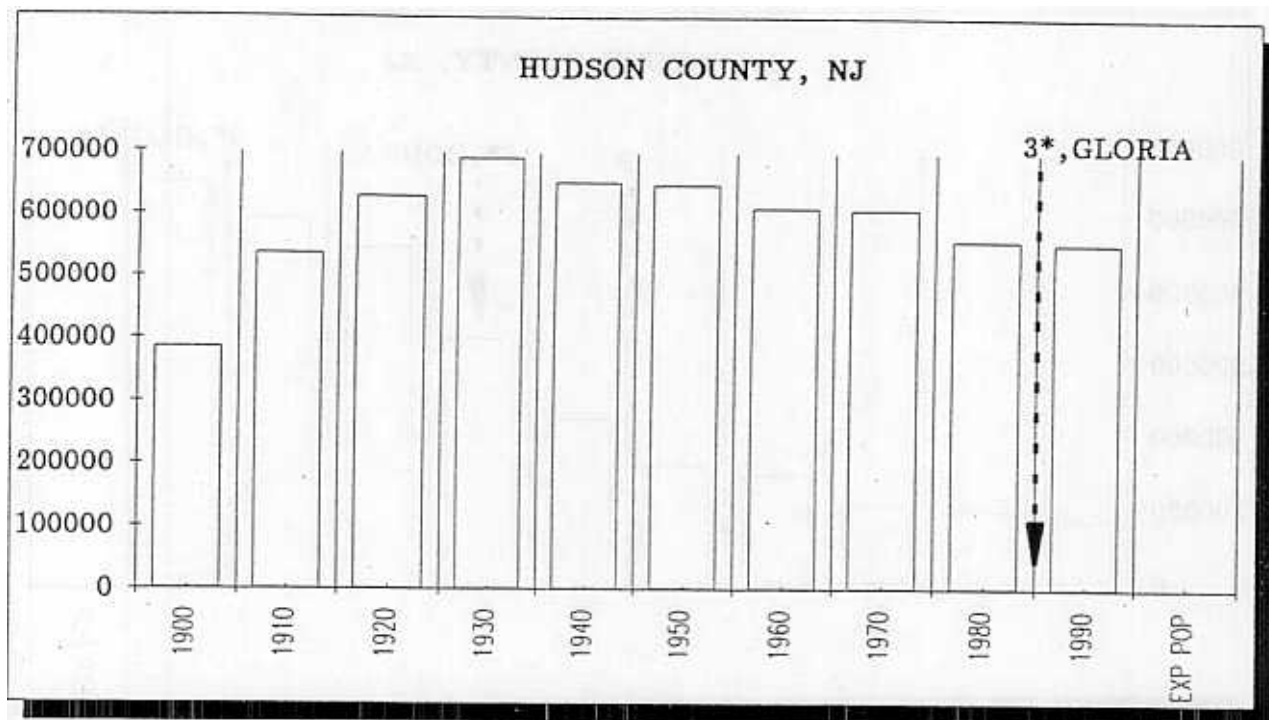








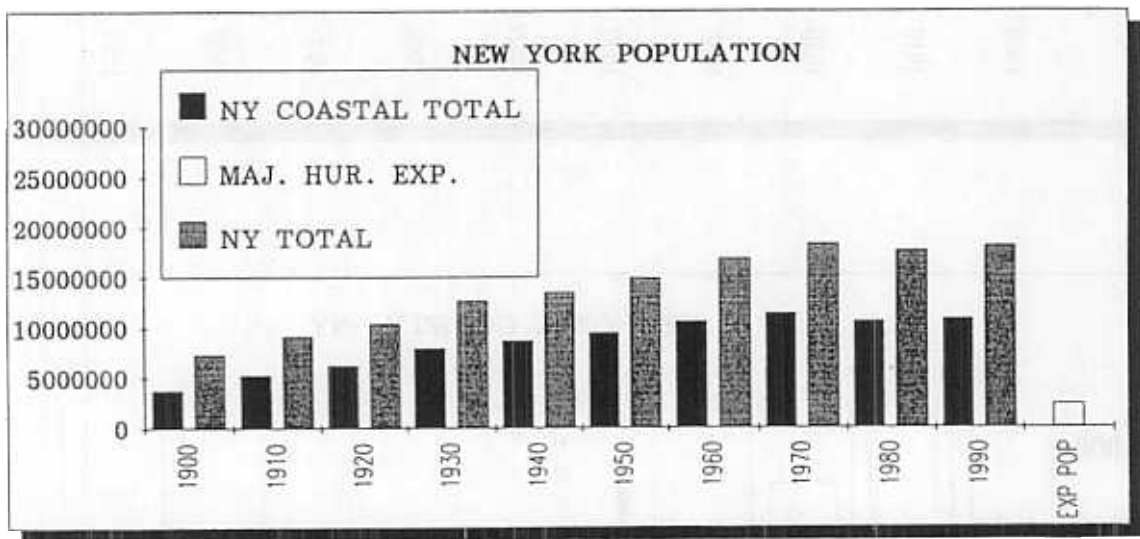


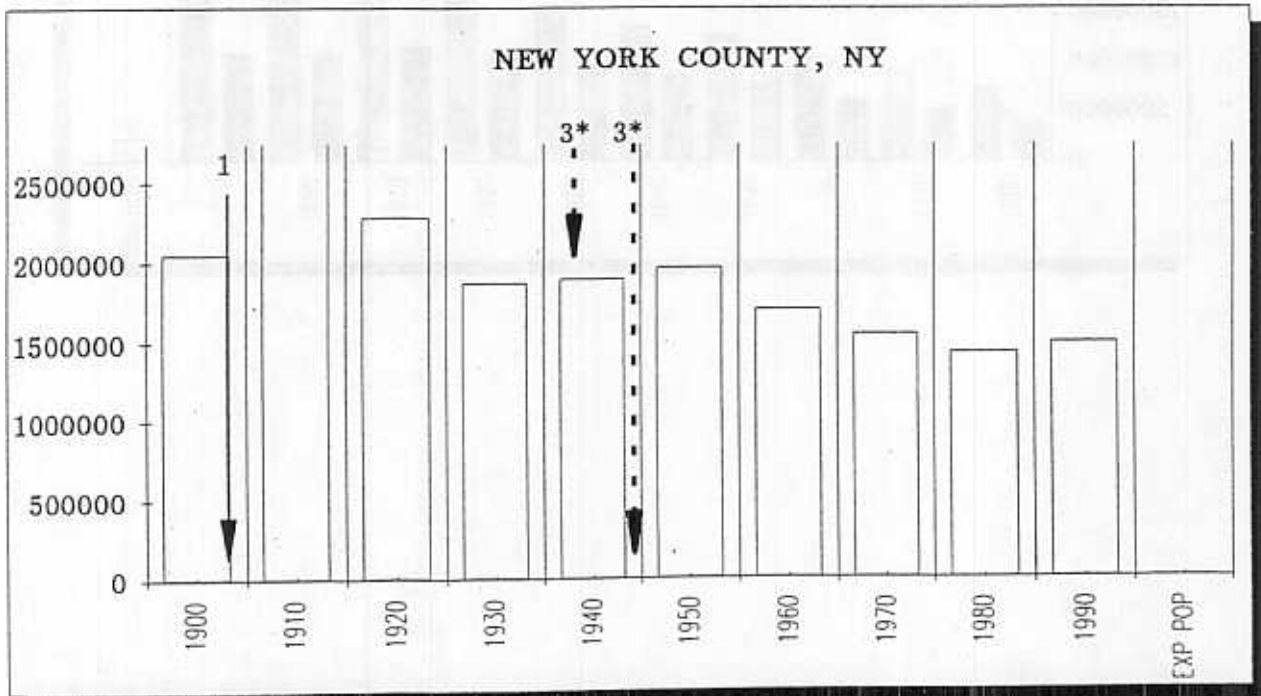
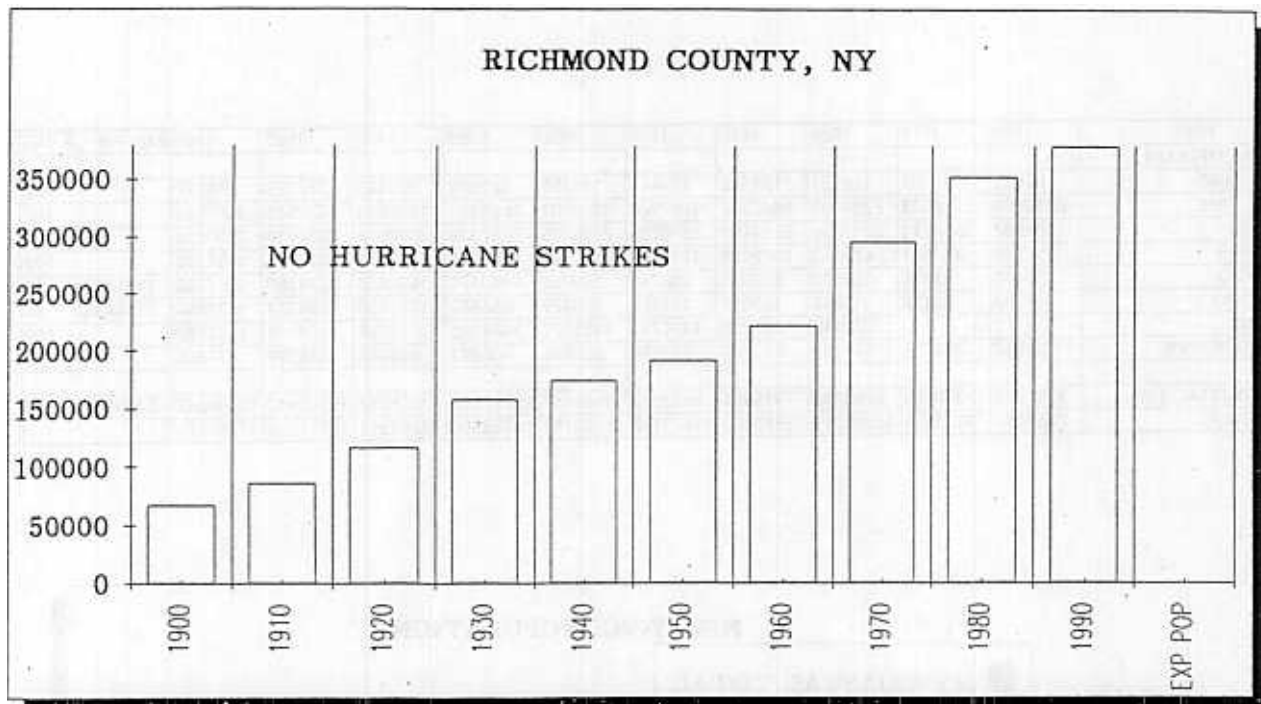


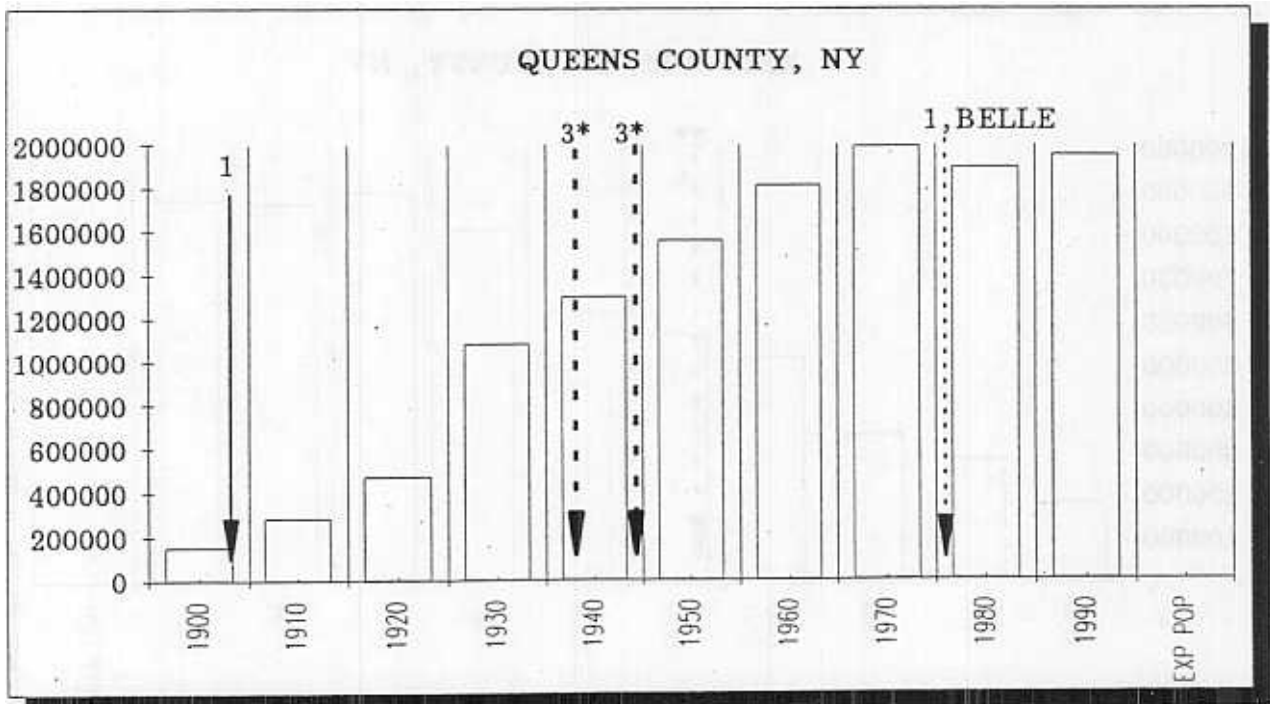
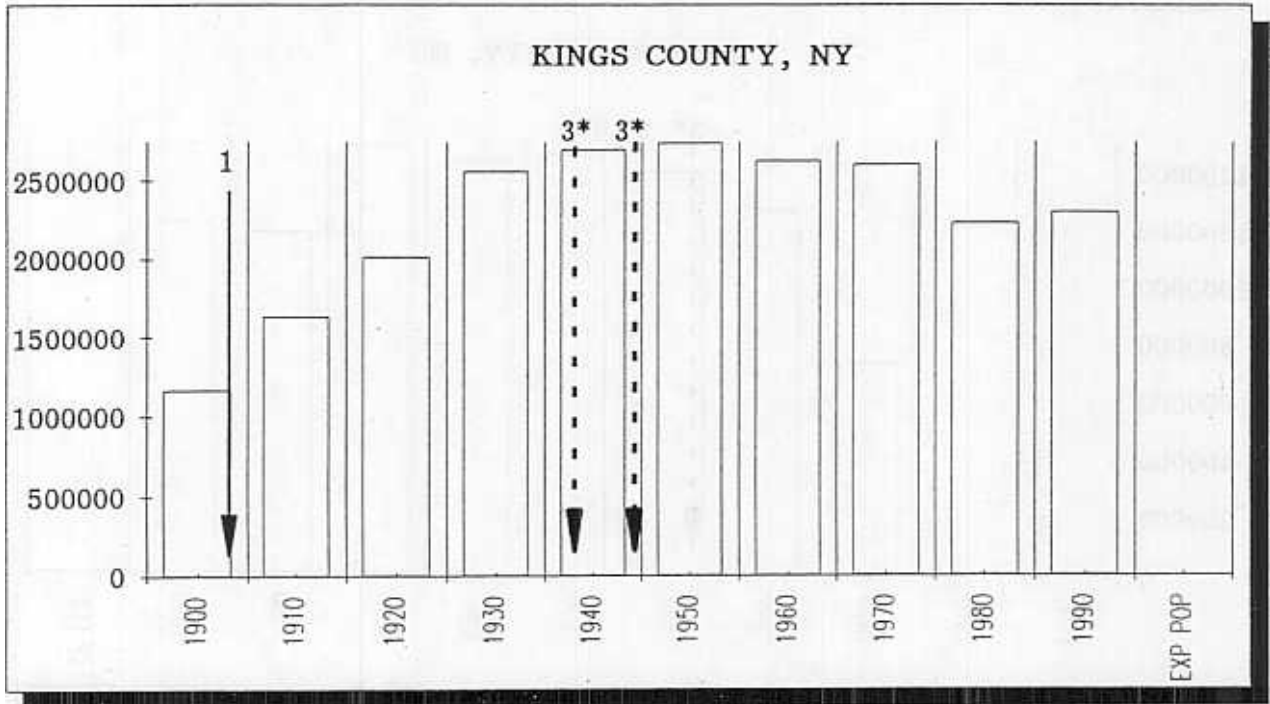
13. NEW YORK (8)

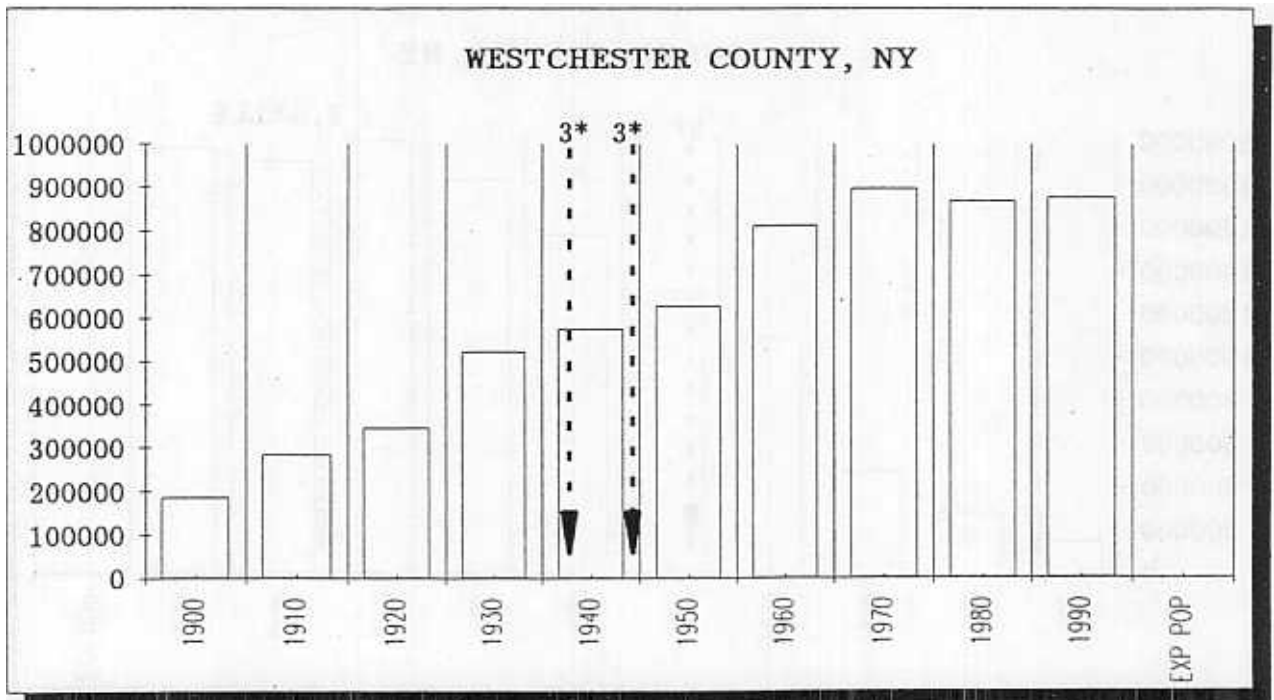
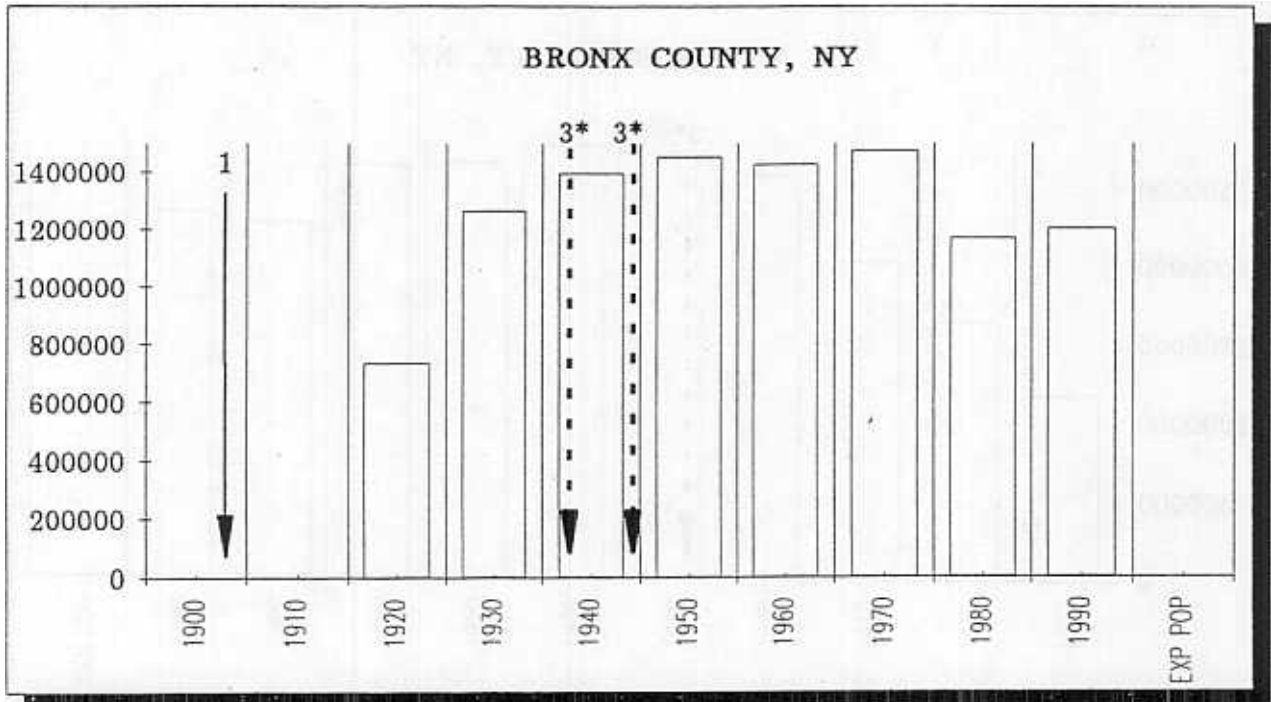
Richmond (Staten Island), New York (Manhattan), Kings (Brooklyn), Queens, Nassau (Jones Beach), Suffolk (Westhampton), Bronx (Bronx), Westchester.

| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| RICHMOND | 67021 | 85969 | 116531 | 158346 | 174441 | 191555 | 221991 | 295443 | 352121 | 378977 | | 100 | |
| NEW YORK | 2050600 | 2762522 | 2284103 | 1867312 | 1889924 | 1960101 | 1698281 | 1539233 | 1427533 | 1487536 | | 100 | |
| KINGS | 1166582 | 1634351 | 2018356 | 2560401 | 2698285 | 2738175 | 2627319 | 2602012 | 2230936 | 2300664 | | 100 | |
| QUEENS | 152999 | 284041 | 469042 | 1079129 | 1297634 | 1550849 | 1809578 | 1987174 | 1891325 | 1951598 | | 100 | |
| NASSAU | 55448 | 83930 | 126120 | 303053 | 406748 | 672765 | 1300171 | 1428838 | 1321582 | 1287348 | 1135667 | 12 | 1985 |
| SUFFOLK | 77582 | 96138 | 110246 | 161055 | 197355 | 276129 | 666784 | 1127030 | 1284231 | 1321864 | 1134433 | 14 | 1985 |
| BRONX | | | 732016 | 1265258 | 1394711 | 1451277 | 1424815 | 1471701 | 1169115 | 1203789 | | 100 | |
| WESTCHESTER | 184257 | 283055 | 344436 | 520947 | 573558 | 625816 | 808891 | 894406 | 866599 | 874866 | | 100 | |
| NY COASTAL TOTAL | 3754489 | 5230006 | 6200850 | 7915501 | 8632656 | 9466667 | 10557830 | 11345837 | 10543442 | 10806642 | 2270100 | 79 | |
| NY TOTAL | 7268894 | 9113614 | 10385227 | 12588066 | 13479142 | 14830192 | 16782304 | 18241391 | 17557280 | 17990455 | | | |





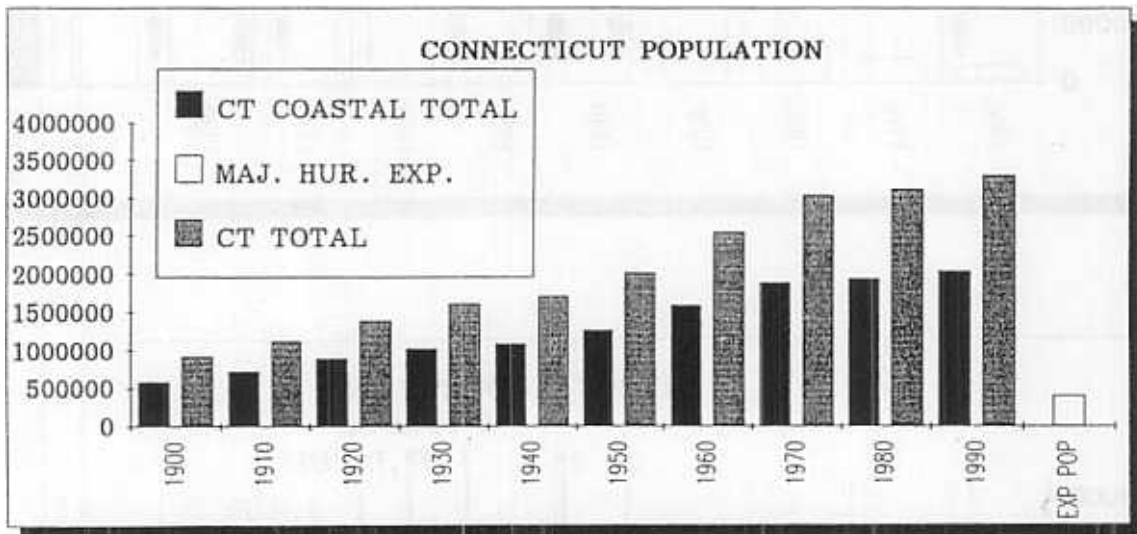


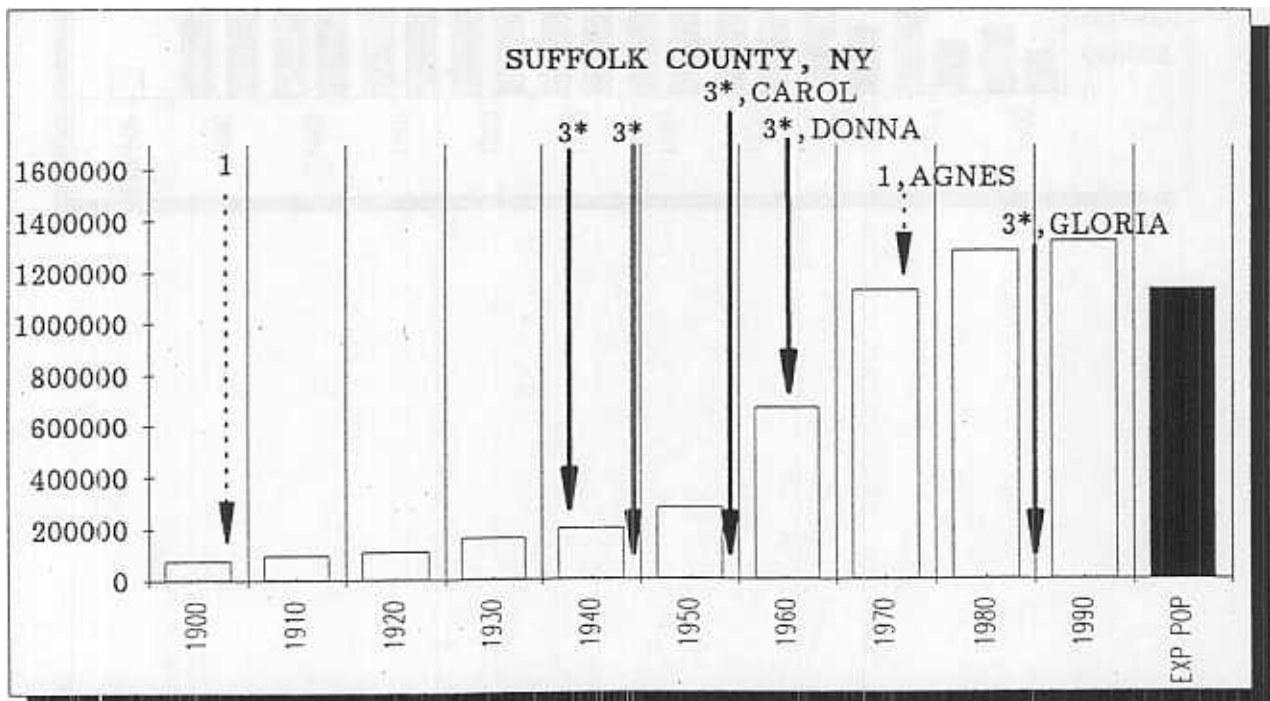
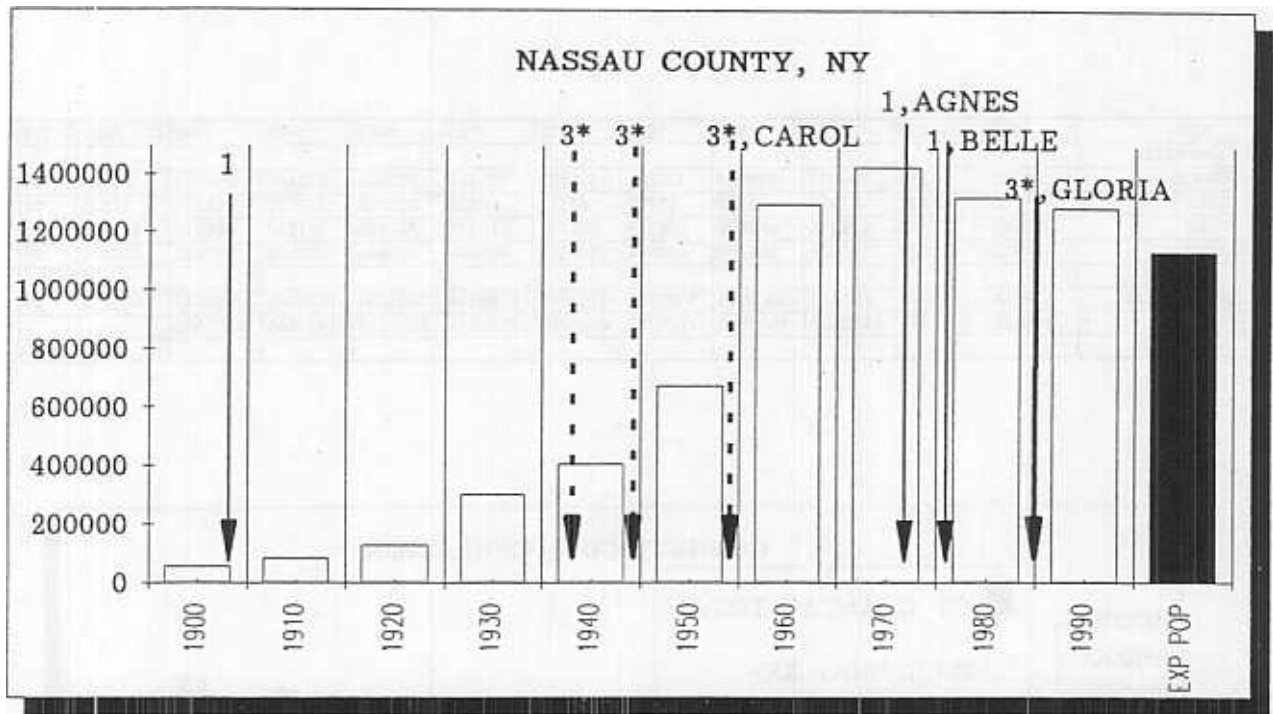


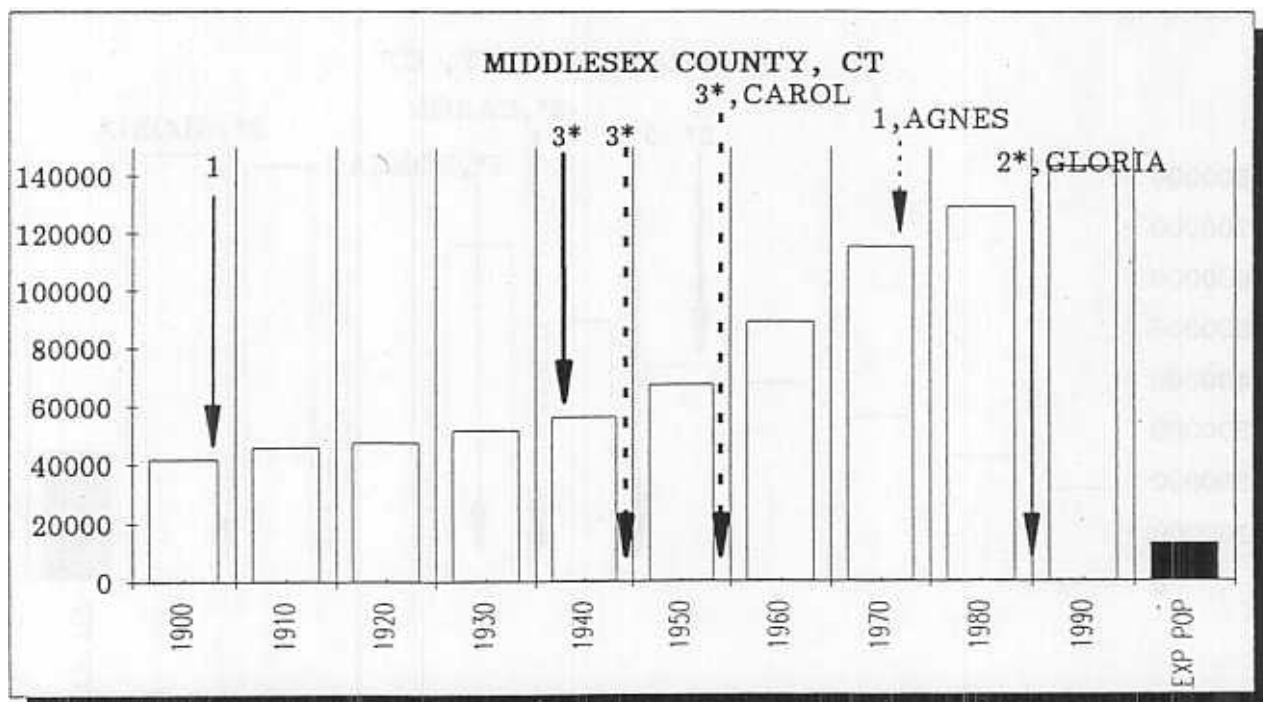
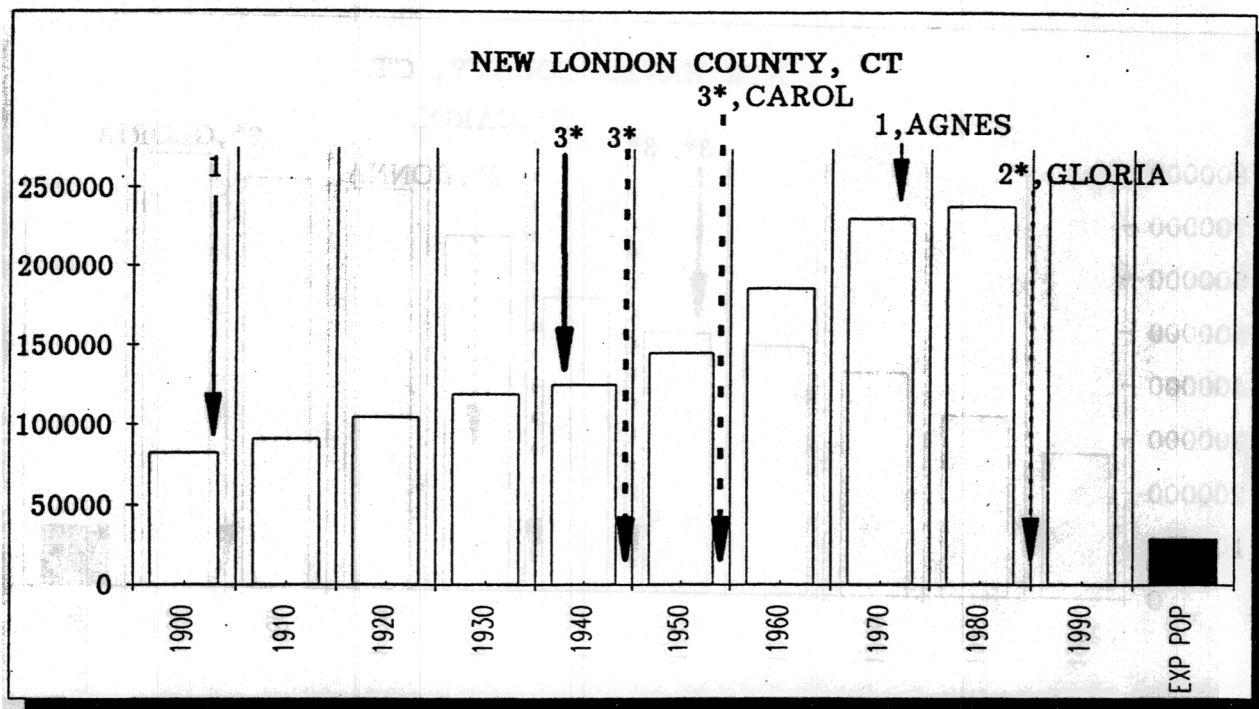
14. CONNECTICUT (4)

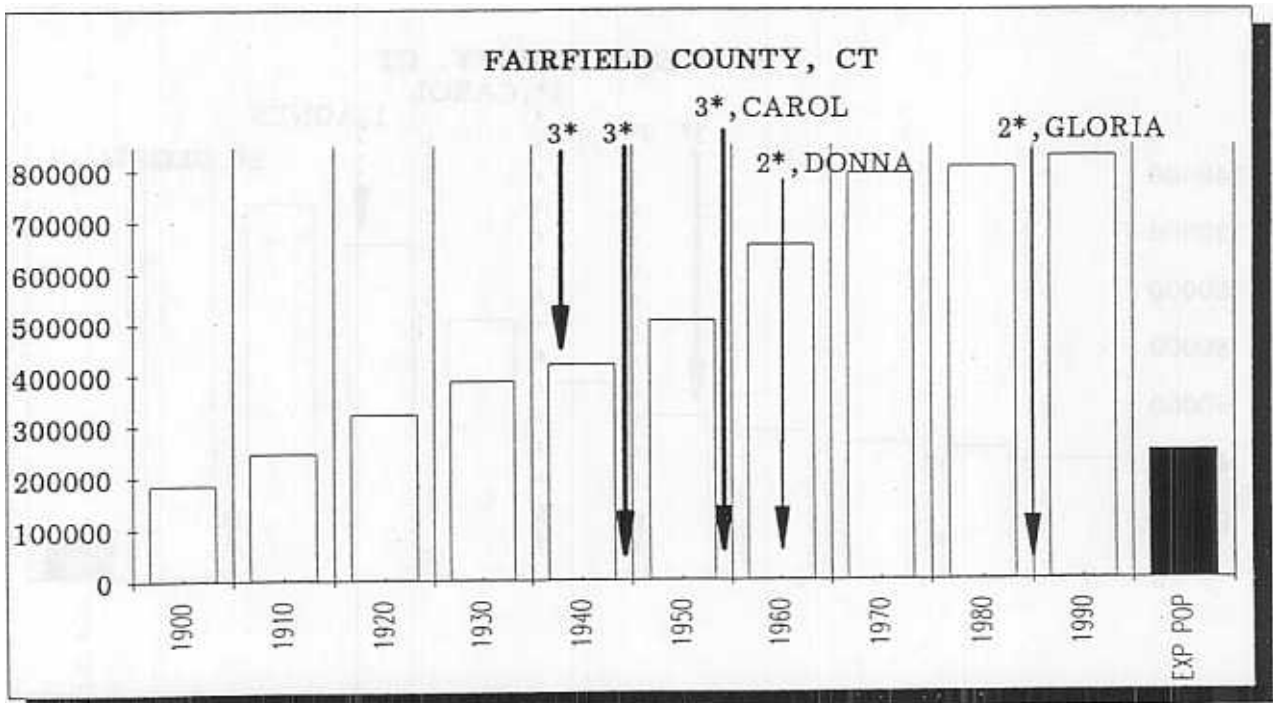
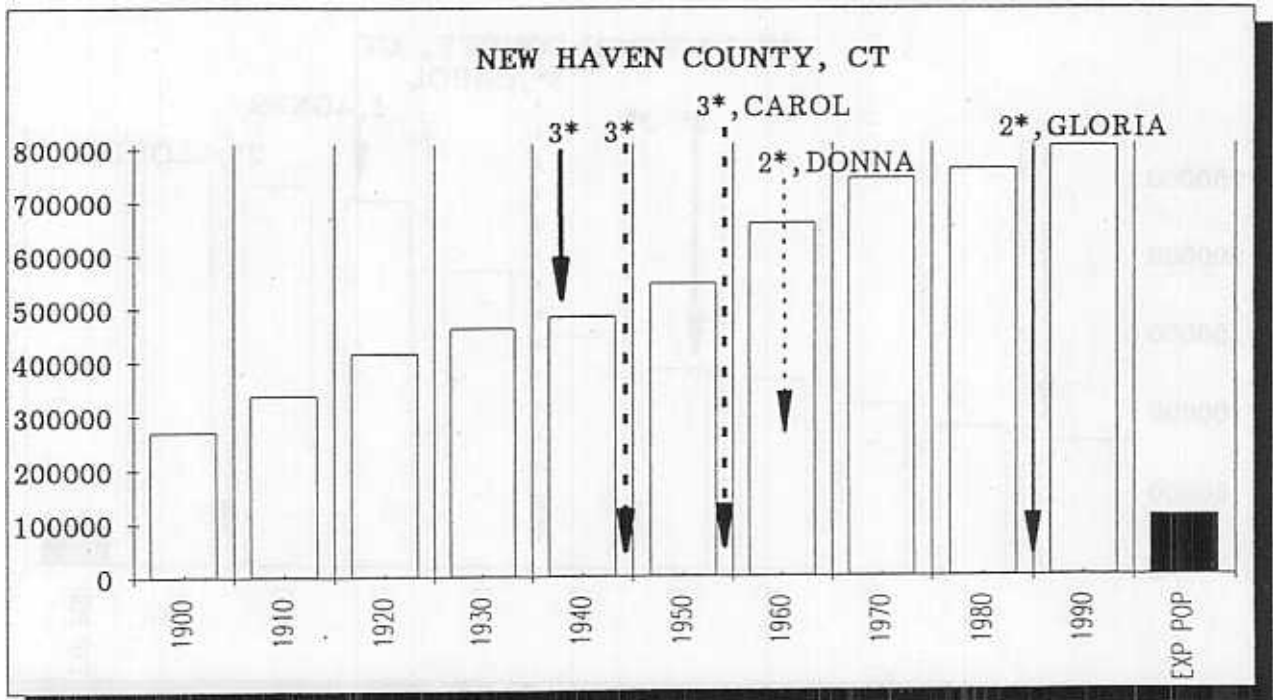
New London (New London), Middlesex, New Haven, Fairfield (Bridgeport).

| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| NEW LONDON | 82758 | 91253 | 104611 | 118966 | 125224 | 144821 | 185745 | 230654 | 238409 | 254957 | 28886 | 89 | 1938 |
| MIDDLESEX | 41760 | 45637 | 47550 | 51388 | 55999 | 67332 | 88865 | 115018 | 129017 | 143196 | 12833 | 91 | 1938 |
| NEW HAVEN | 269163 | 337282 | 415214 | 463449 | 484316 | 545784 | 660315 | 744948 | 761337 | 804219 | 111873 | 86 | 1938 |
| FAIRFIELD | 184203 | 245322 | 320936 | 386702 | 418384 | 504342 | 653589 | 792814 | 807143 | 827645 | 247614 | 70 | 1954 |
| CT COASTAL TOTAL | 577884 | 719494 | 888311 | 1020505 | 1083923 | 1262279 | 1588514 | 1883434 | 1935906 | 2030017 | 401206 | 80 | |
| CT TOTAL | 908640 | 1114756 | 1380631 | 1606903 | 1709242 | 2007280 | 2535234 | 3032217 | 3107576 | 3287116 | | | |





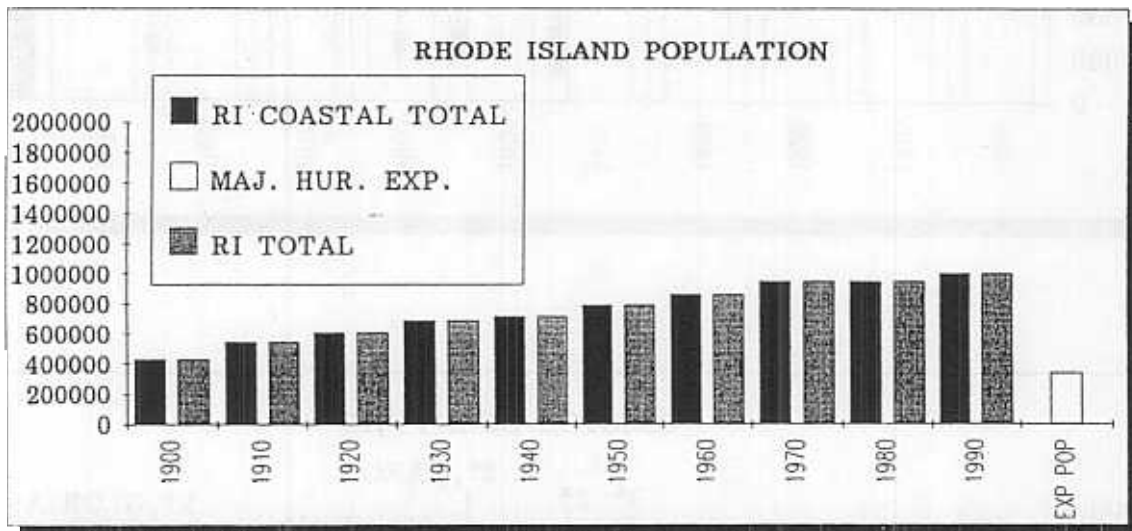


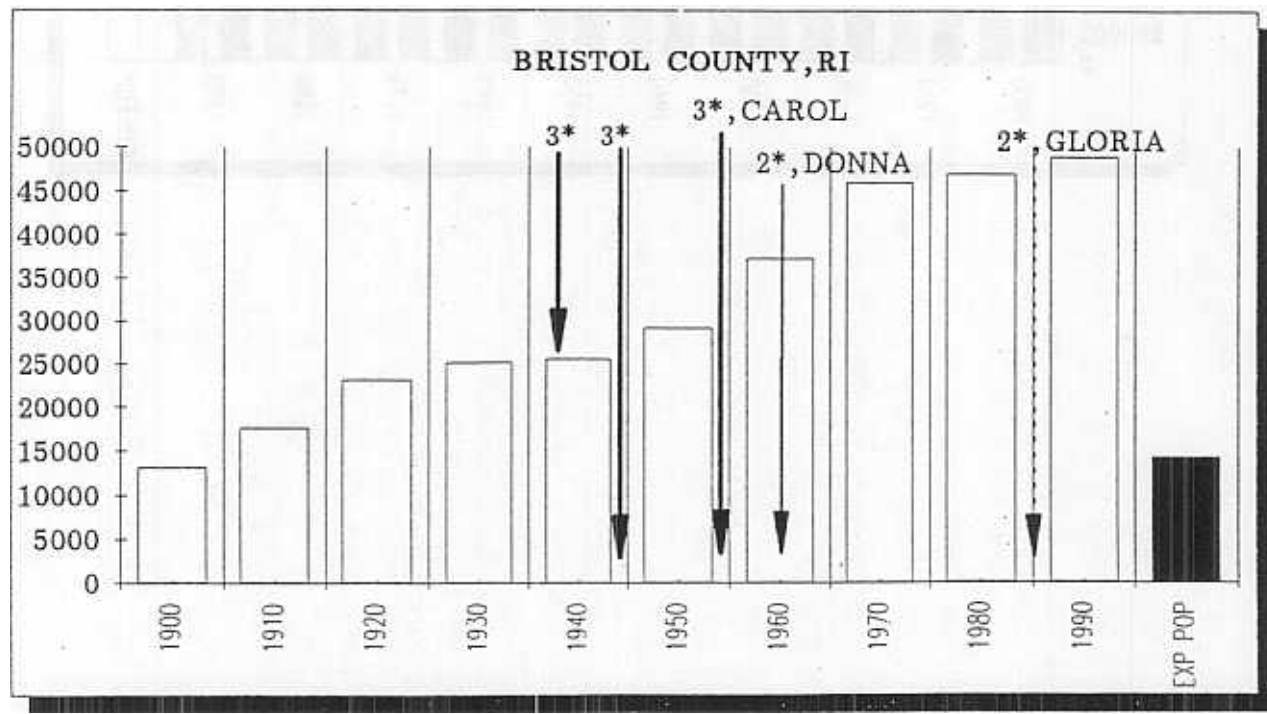
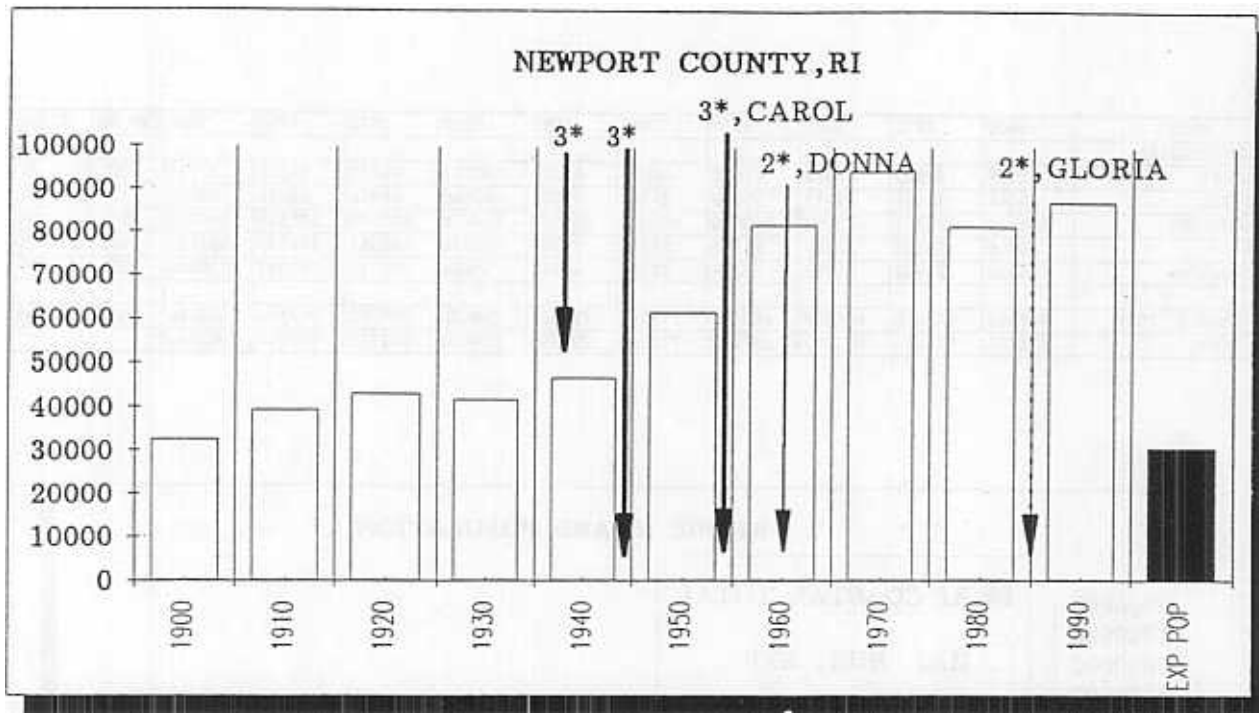


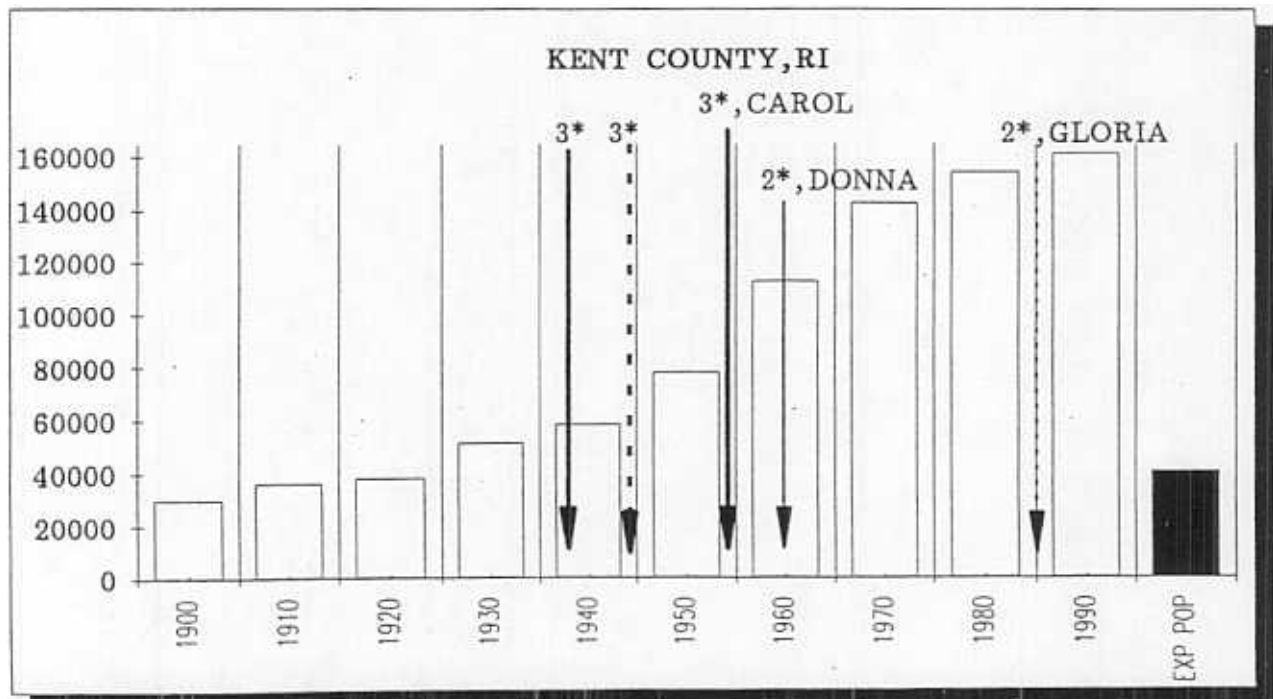
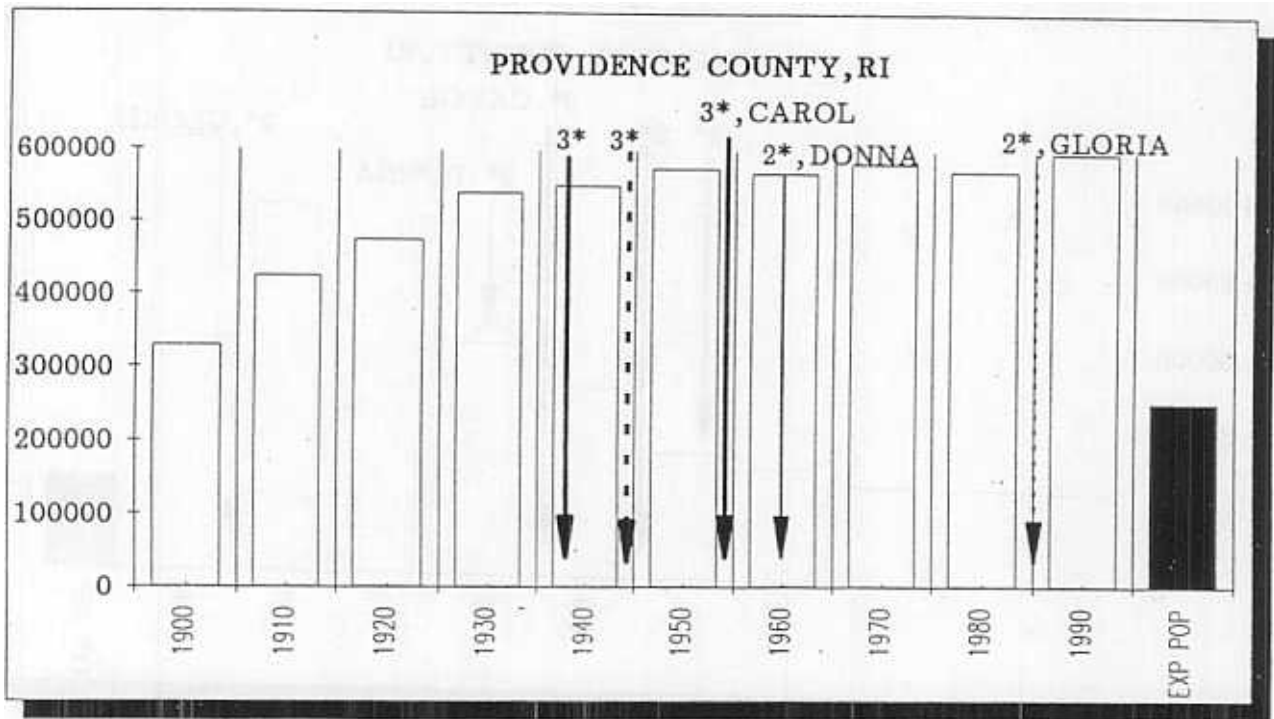
15. RHODE ISLAND (5)

Newport (Newport), Bristol (Bristol), Providence (Providence), Kent, Washington (Narragansett Point).

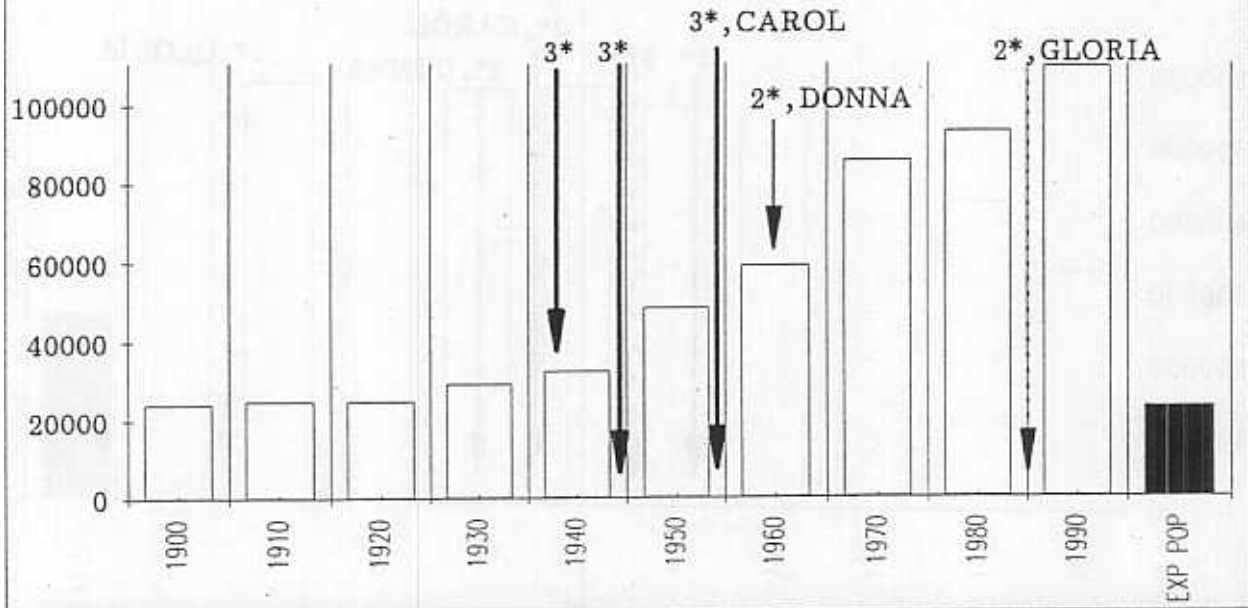
| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| NEWPORT | 32599 | 39335 | 42893 | 41668 | 46696 | 61539 | 81891 | 94228 | 81383 | 87194 | 30589 | 65 | 1954 |
| BRISTOL | 13144 | 17602 | 23113 | 25089 | 25548 | 29079 | 37146 | 45937 | 46942 | 48859 | 14182 | 71 | 1954 |
| PROVIDENCE | 328683 | 424353 | 475190 | 540016 | 550298 | 574973 | 568778 | 581470 | 571349 | 596270 | 251325 | 58 | 1954 |
| KENT | 29976 | 36378 | 38269 | 51390 | 58311 | 77763 | 112619 | 142382 | 154163 | 161135 | 40259 | 75 | 1954 |
| WASHINGTON | 24154 | 24942 | 24932 | 29334 | 32493 | 48542 | 59054 | 85706 | 93317 | 110006 | 23156 | 79 | 1954 |
| RI COASTAL TOTAL | 428556 | 542610 | 604397 | 687497 | 713346 | 791896 | 859488 | 949723 | 947154 | 1003464 | 336356 | 66 | |
| RI TOTAL | 428556 | 542610 | 604397 | 687497 | 713346 | 791896 | 859488 | 949723 | 947154 | 1003464 | | | |







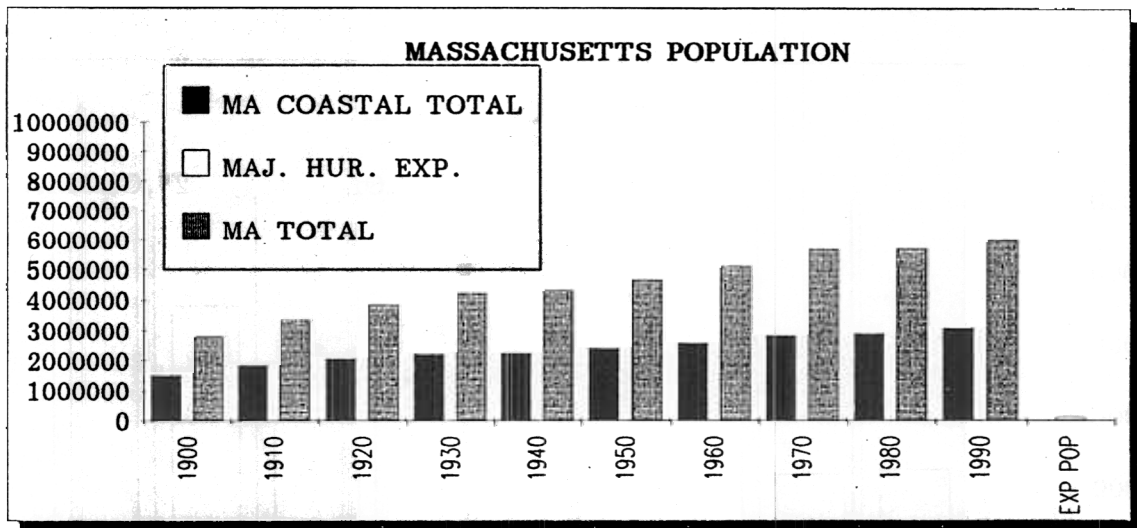
WASHINGTON COUNTY, RI

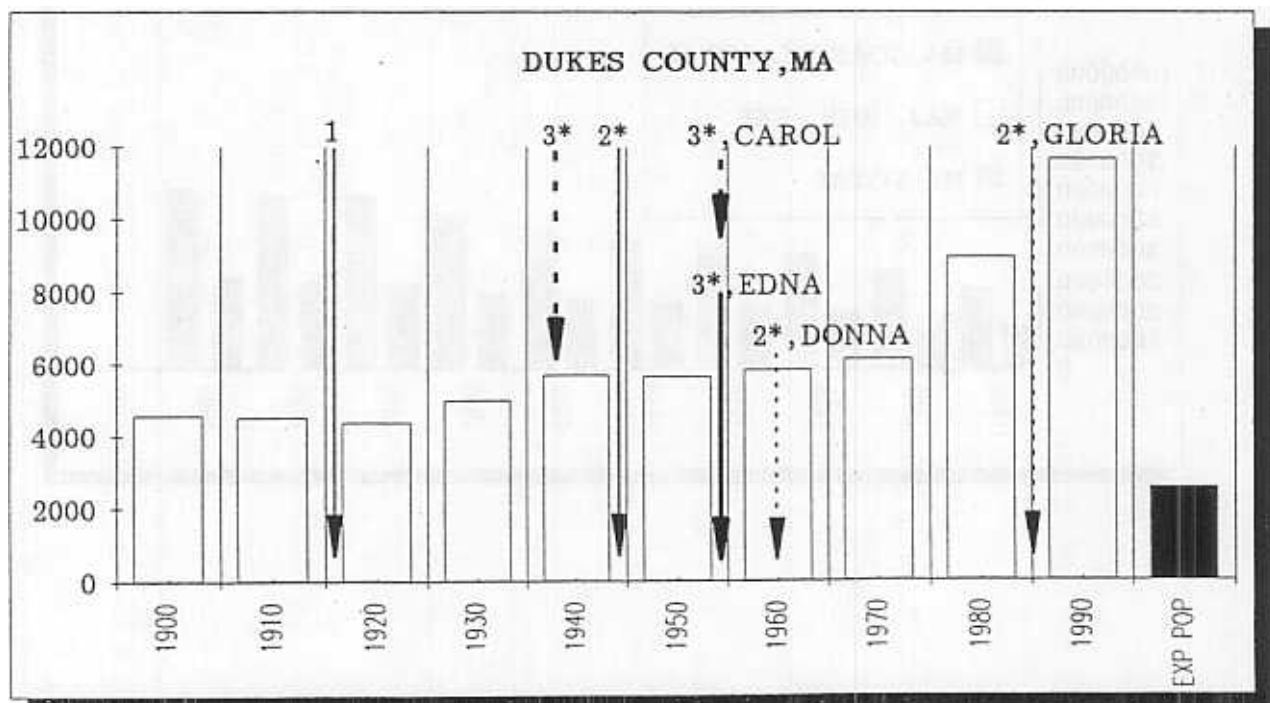
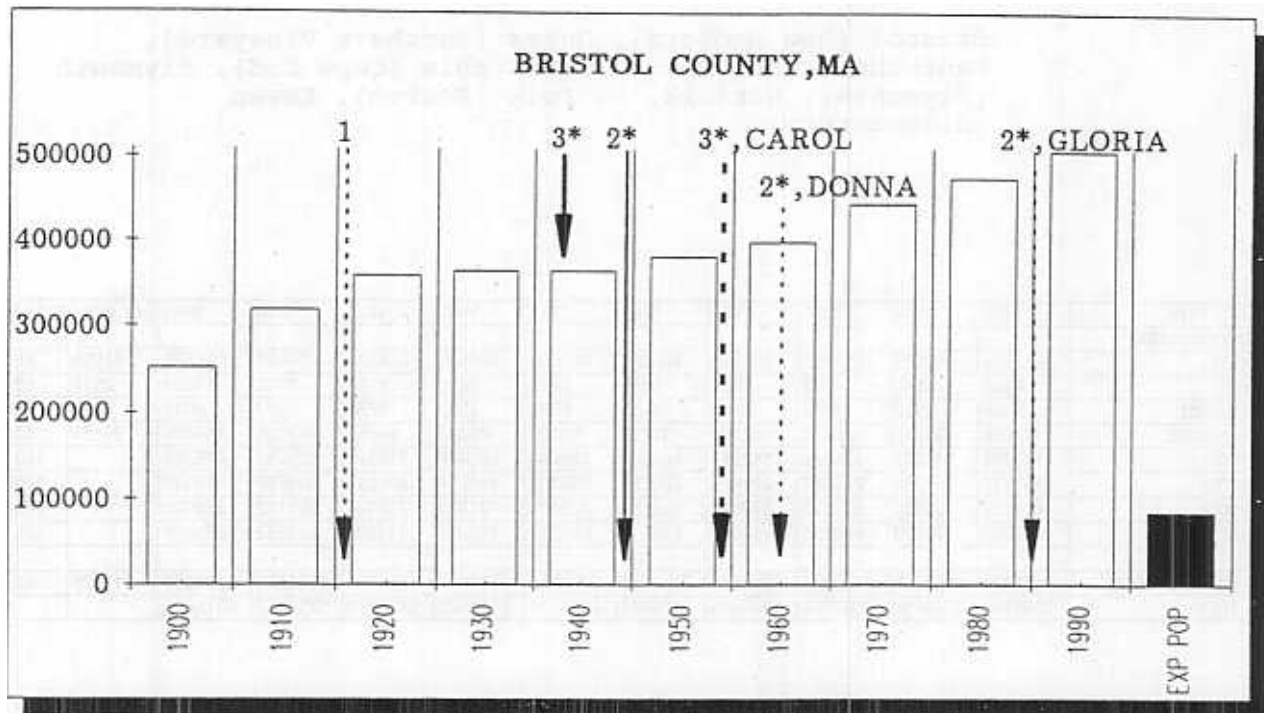


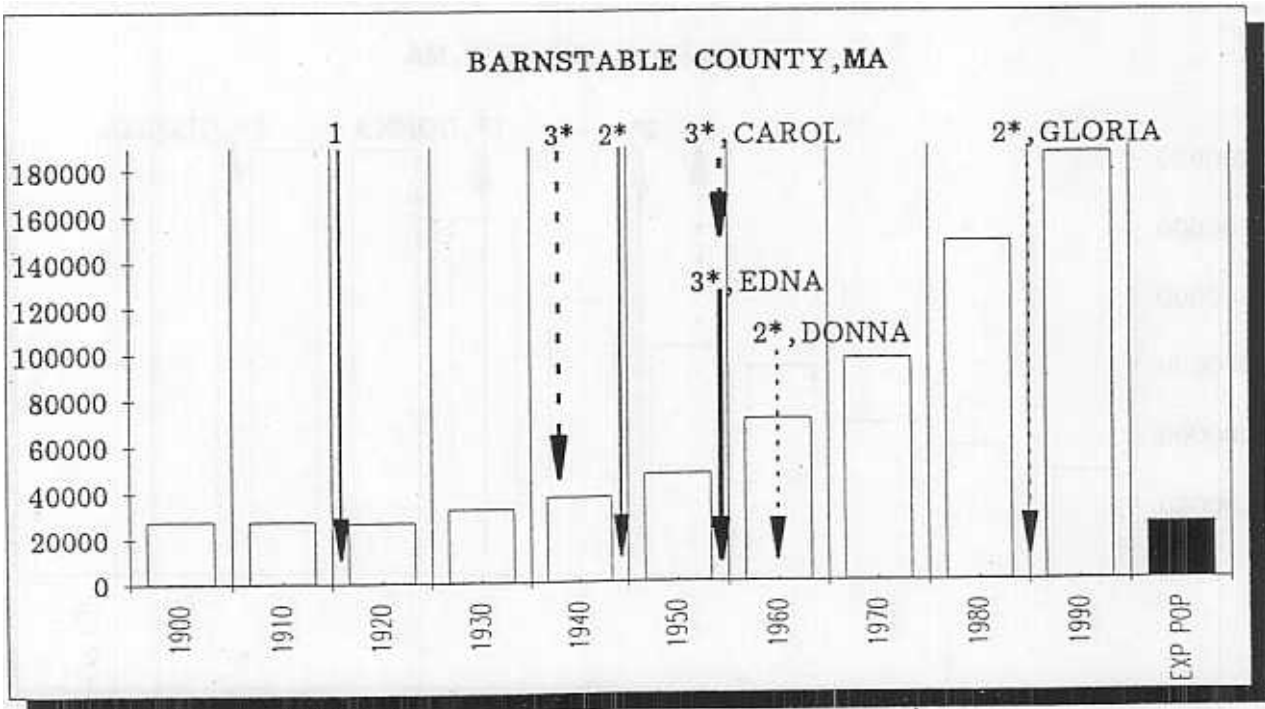
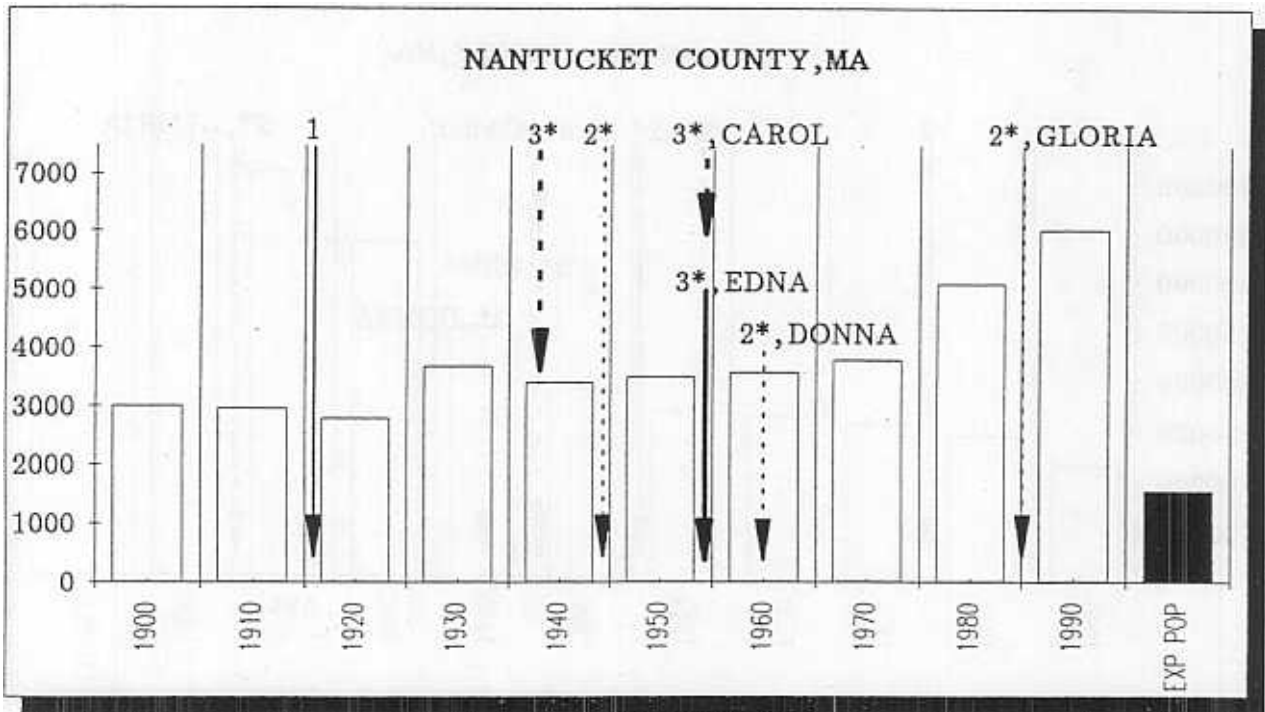
16. MASSACHUSETTS (8)

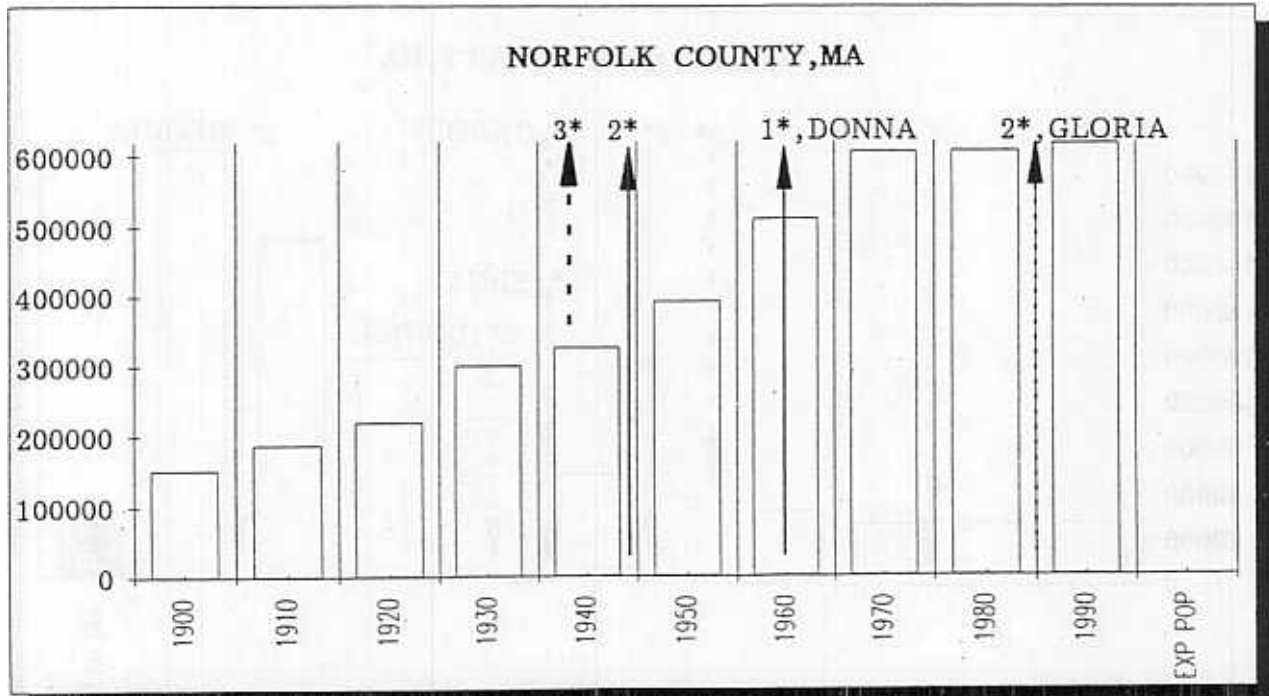
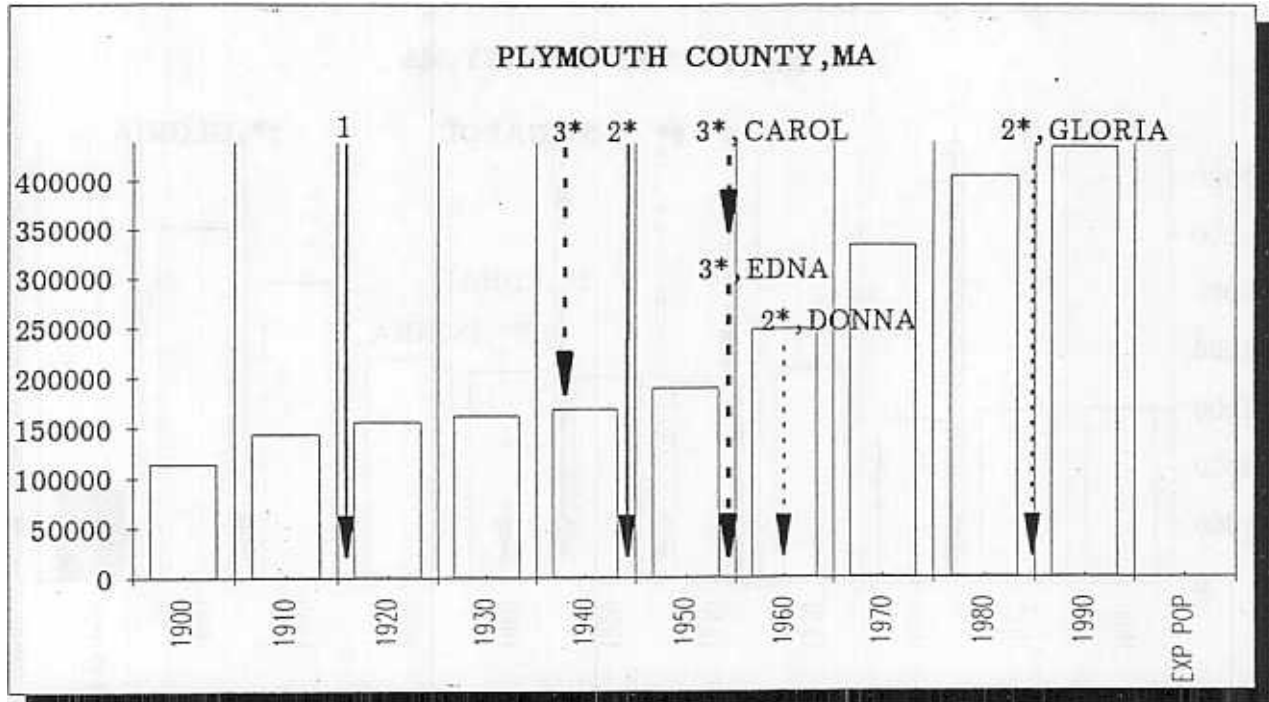
Bristol (New Bedford), Dukes (Martha's Vineyard),
Nantucket (Nantucket), Barnstable (Cape Cod), Plymouth
(Plymouth), Norfolk, Suffolk (Boston), Essex
(Gloucester).

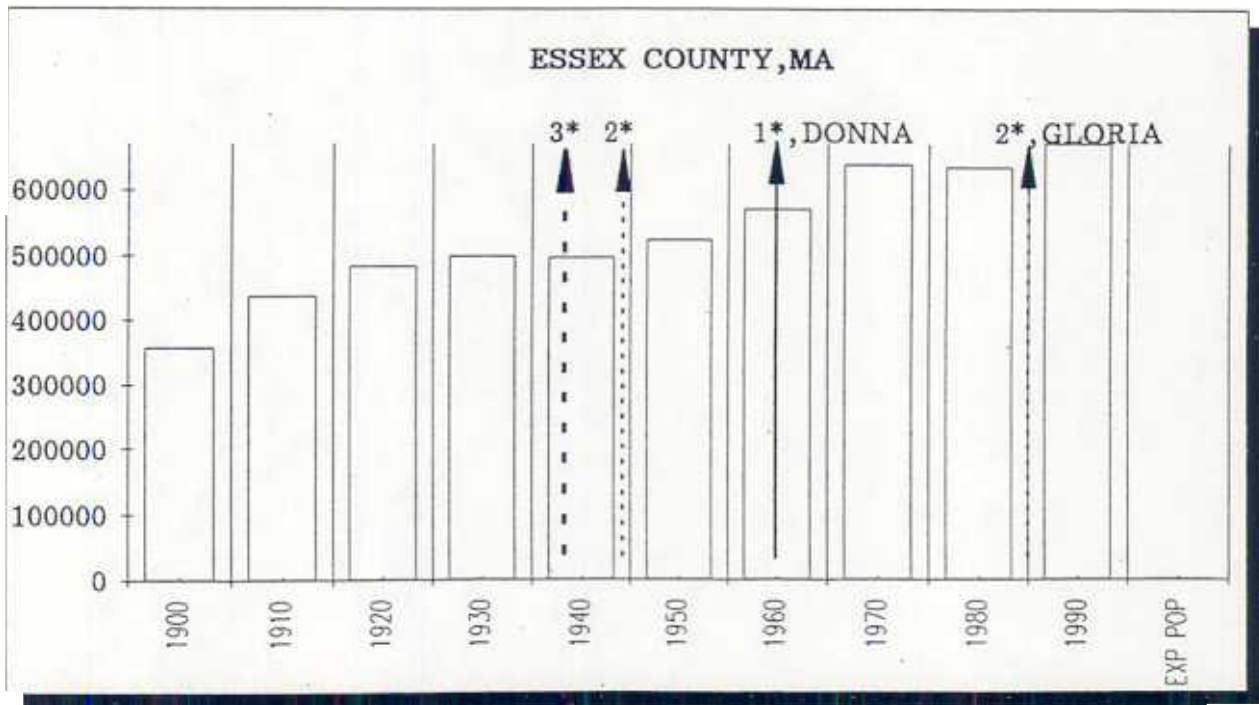
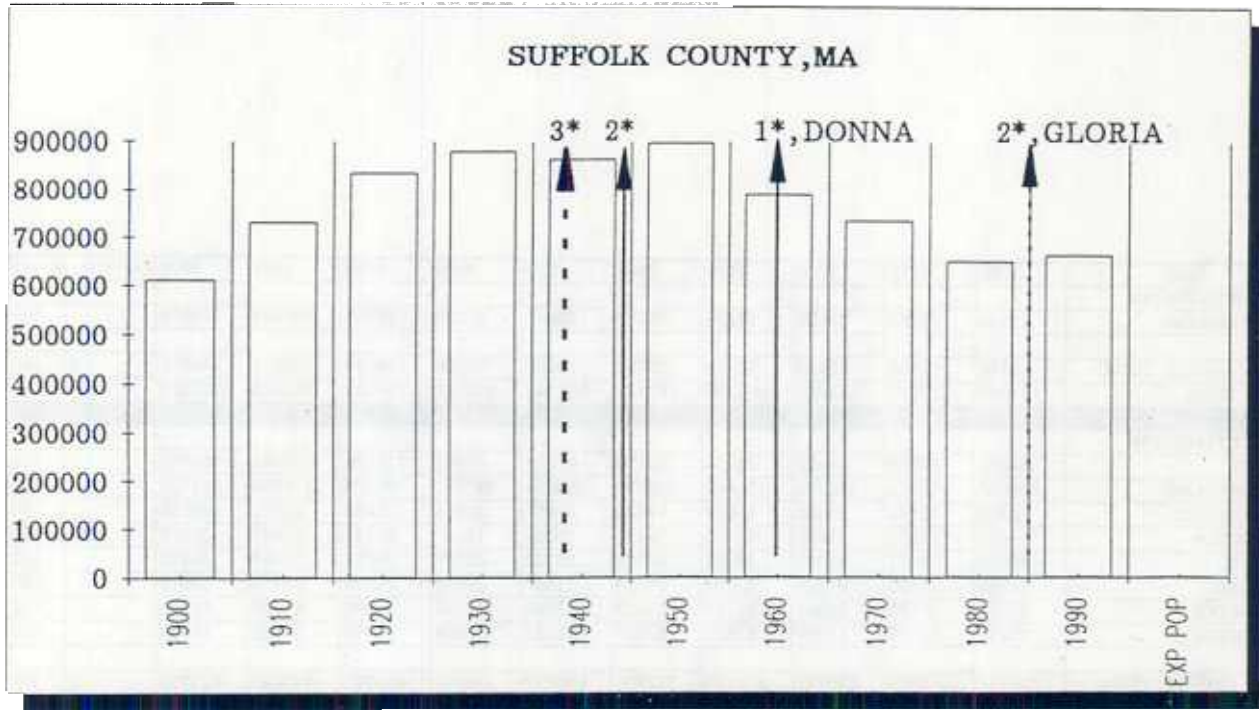
| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| BRISTOL | 252029 | 318573 | 359005 | 364590 | 364637 | 381569 | 398488 | 444301 | 474641 | 506325 | 84958 | 83 | 1938 |
| DUKES | 4561 | 4504 | 4372 | 4953 | 5669 | 5633 | 5829 | 6117 | 8942 | 11639 | 2507 | 78 | 1954 |
| NANTUCKET | 3006 | 2962 | 2797 | 3678 | 3401 | 3484 | 3559 | 3774 | 5087 | 6012 | 1543 | 74 | 1954 |
| BARNSTABLE | 27826 | 27542 | 26670 | 32305 | 37295 | 46805 | 70286 | 96656 | 147925 | 186605 | 24671 | 87 | 1954 |
| PLYMOUTH | 113985 | 144337 | 156968 | 162311 | 168824 | 189468 | 248449 | 333314 | 405437 | 435276 | | 100 | |
| NORFOLK | 151539 | 187506 | 219081 | 299426 | 325180 | 392308 | 510256 | 604854 | 606587 | 616087 | | 100 | |
| SUFFOLK | 611417 | 731388 | 835522 | 879536 | 863248 | 896615 | 791329 | 735190 | 650142 | 663906 | | 100 | |
| ESSEX | 357030 | 436477 | 482156 | 498040 | 496313 | 522384 | 568831 | 637887 | 633632 | 670080 | | 100 | |
| MA COASTAL TOTAL | 1521393 | 1853289 | 2086571 | 2244839 | 2264567 | 2438266 | 2597027 | 2862093 | 2932393 | 3095930 | 113679 | 96 | |
| MA TOTAL | 2805346 | 3366416 | 3852356 | 4249614 | 4316721 | 4690514 | 5148578 | 5689170 | 5737037 | 6016425 | | | |











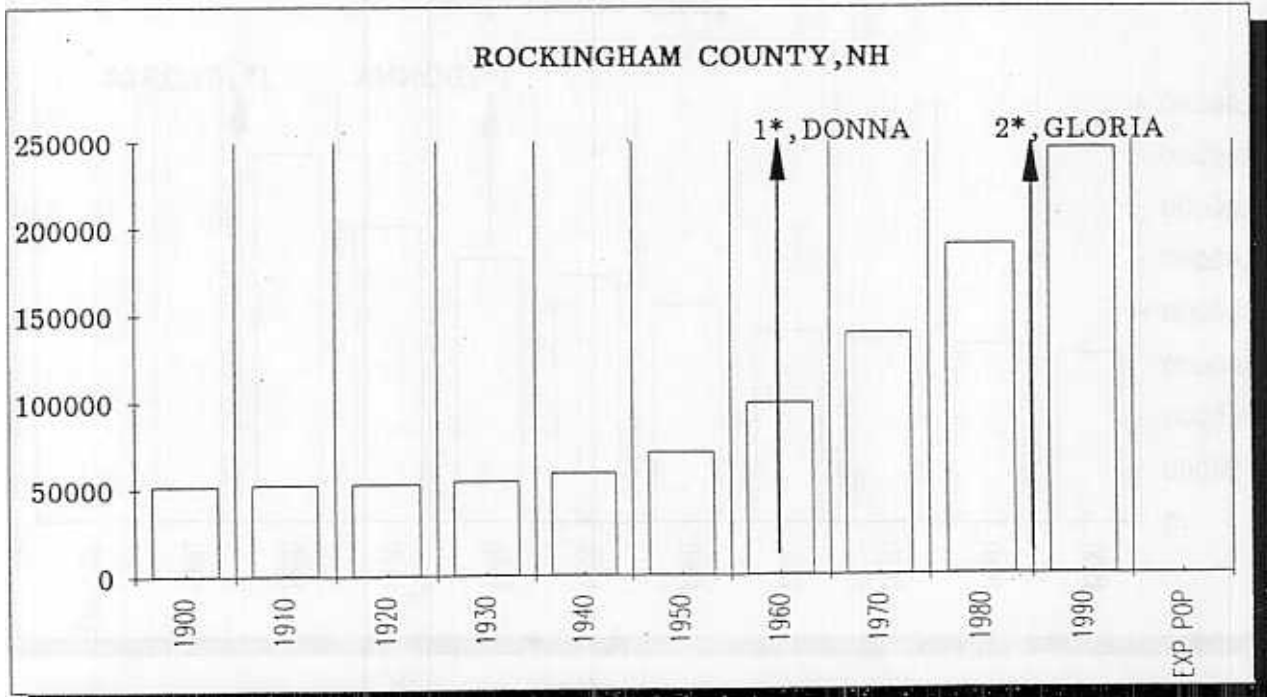
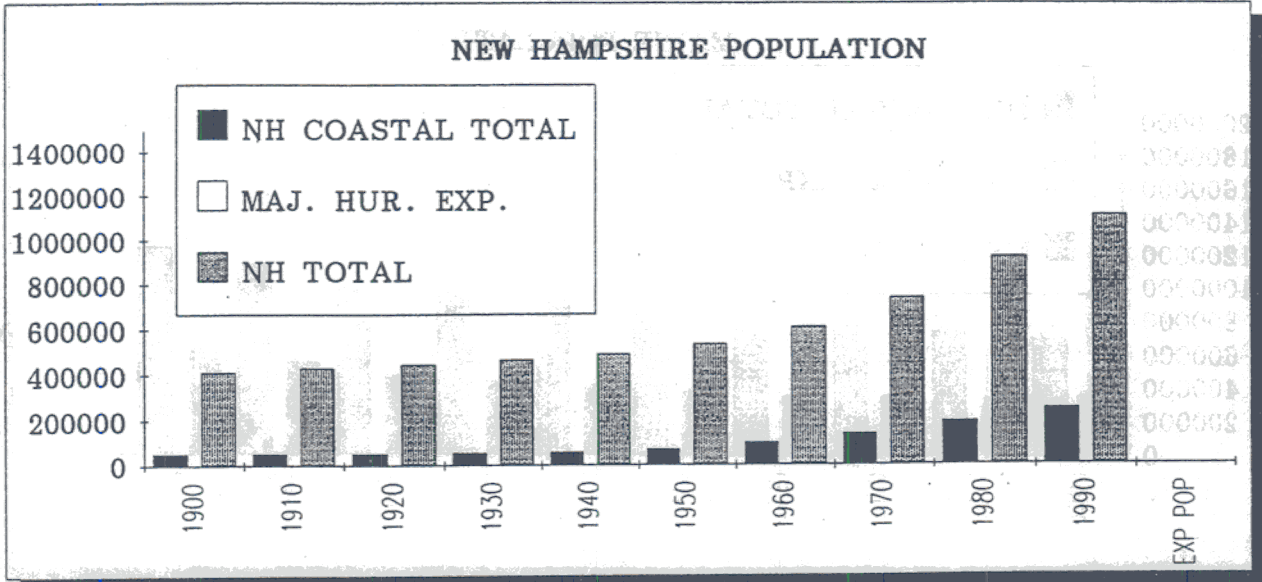
17. NEW HAMPSHIRE (1

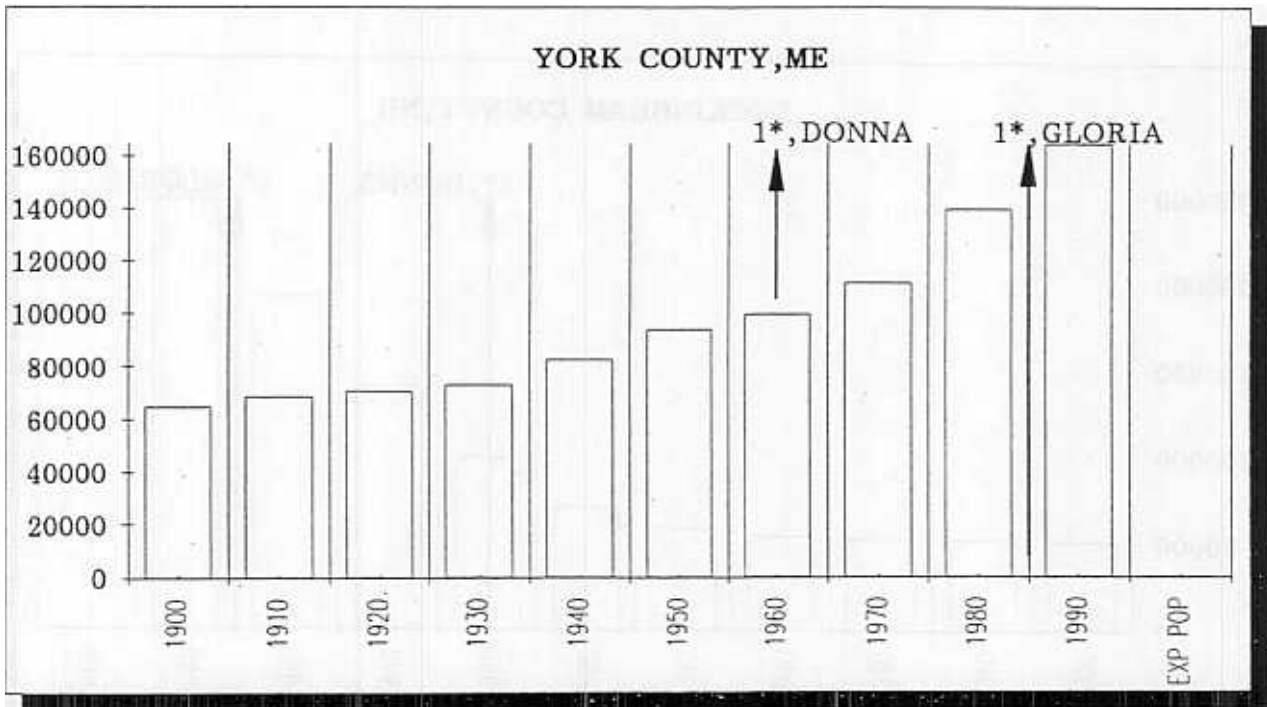
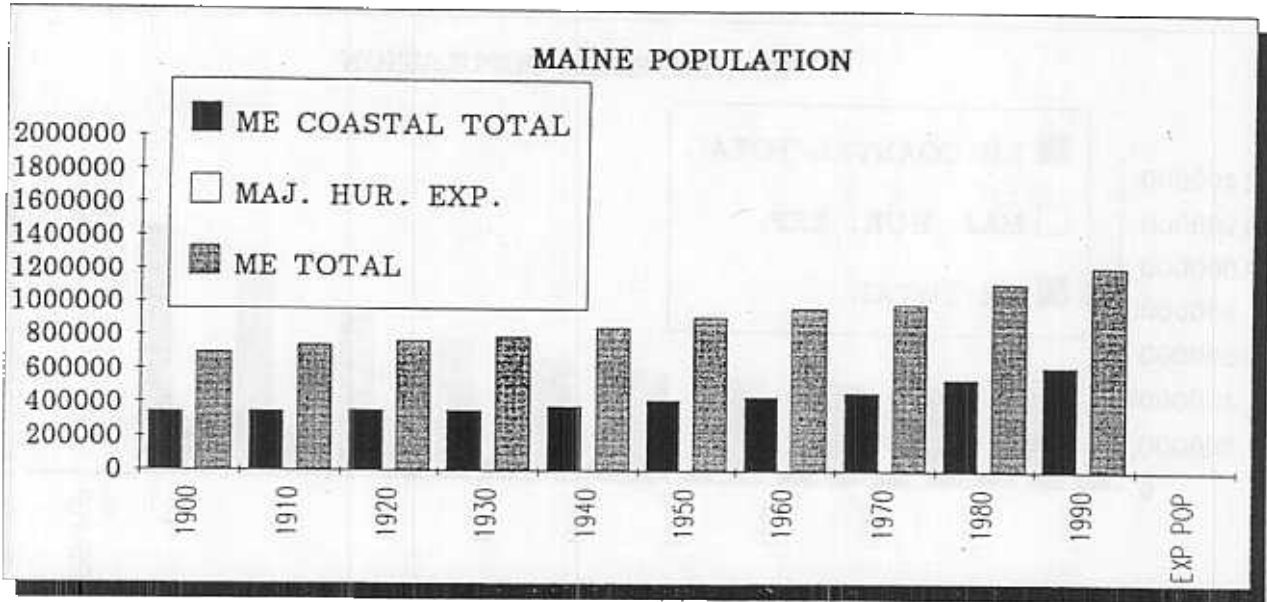
Rockingham (Portsmouth)

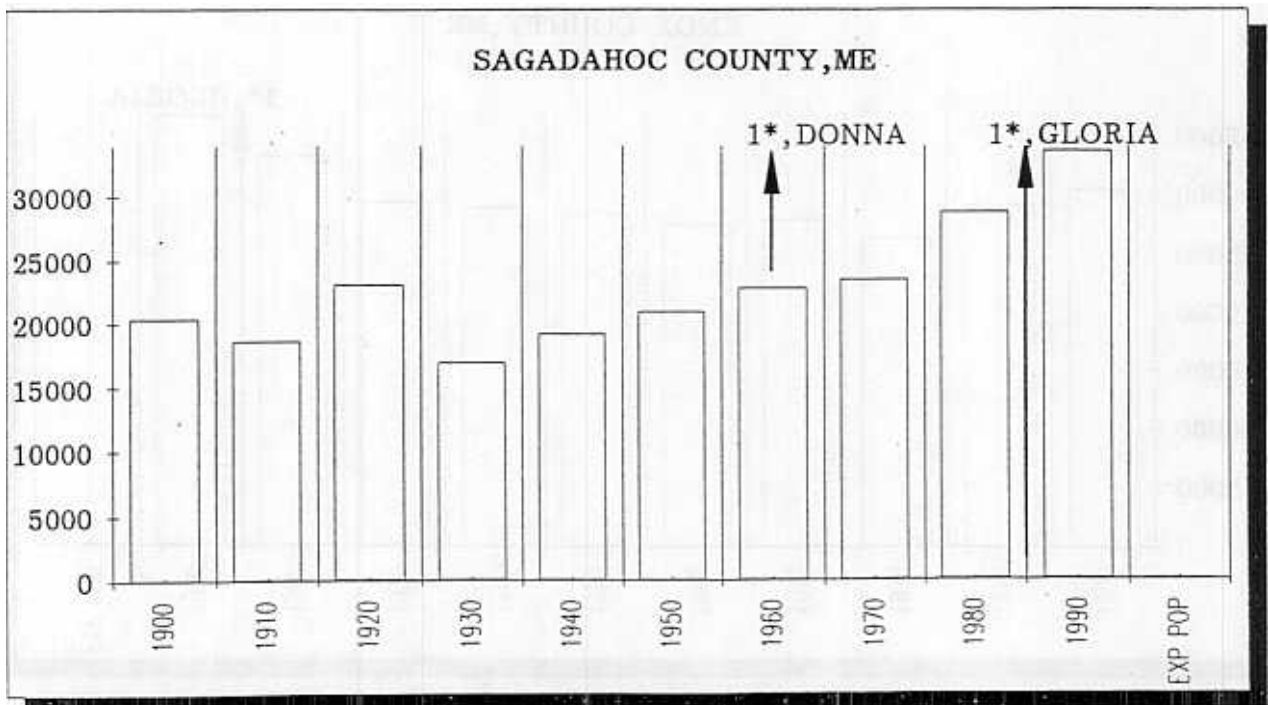
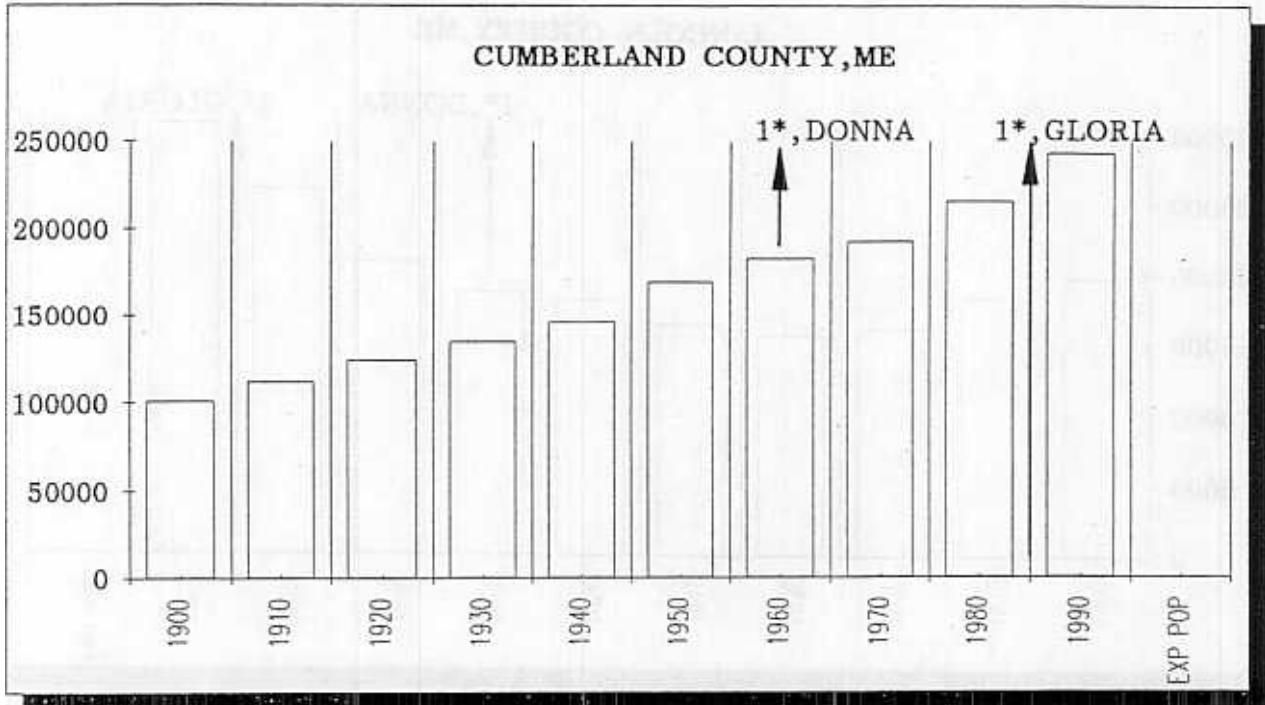
MAINE (8)

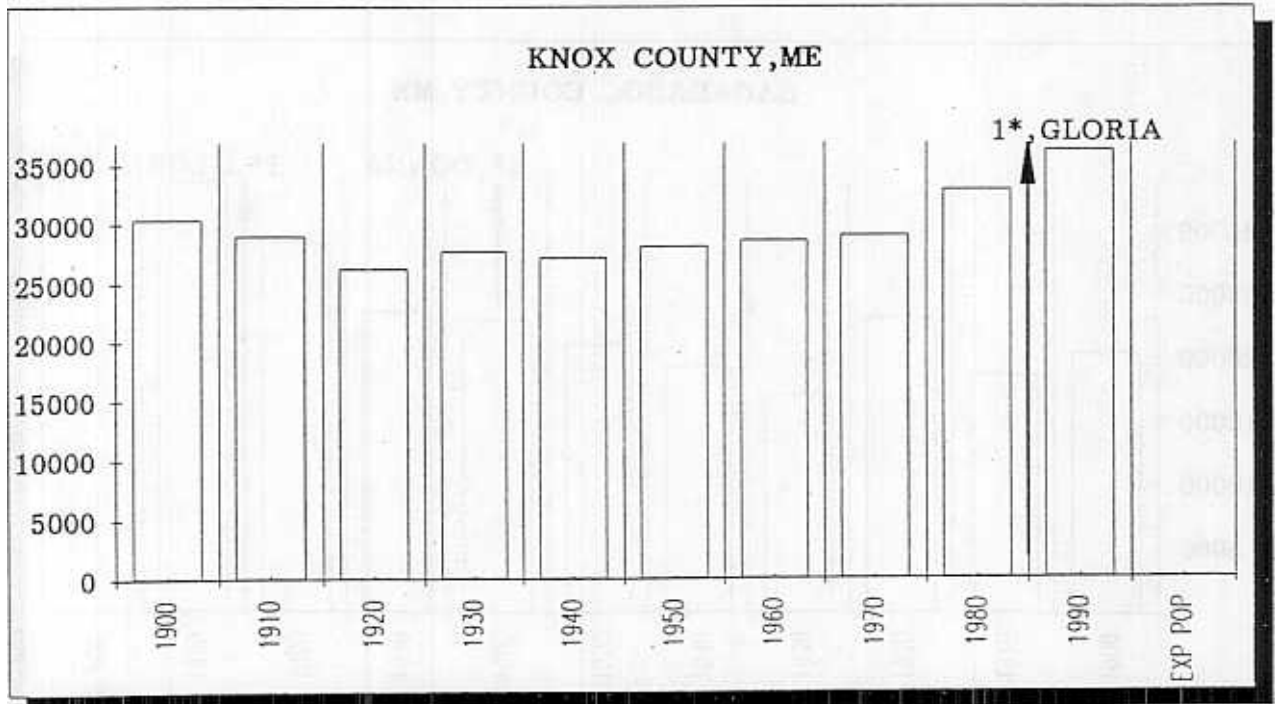
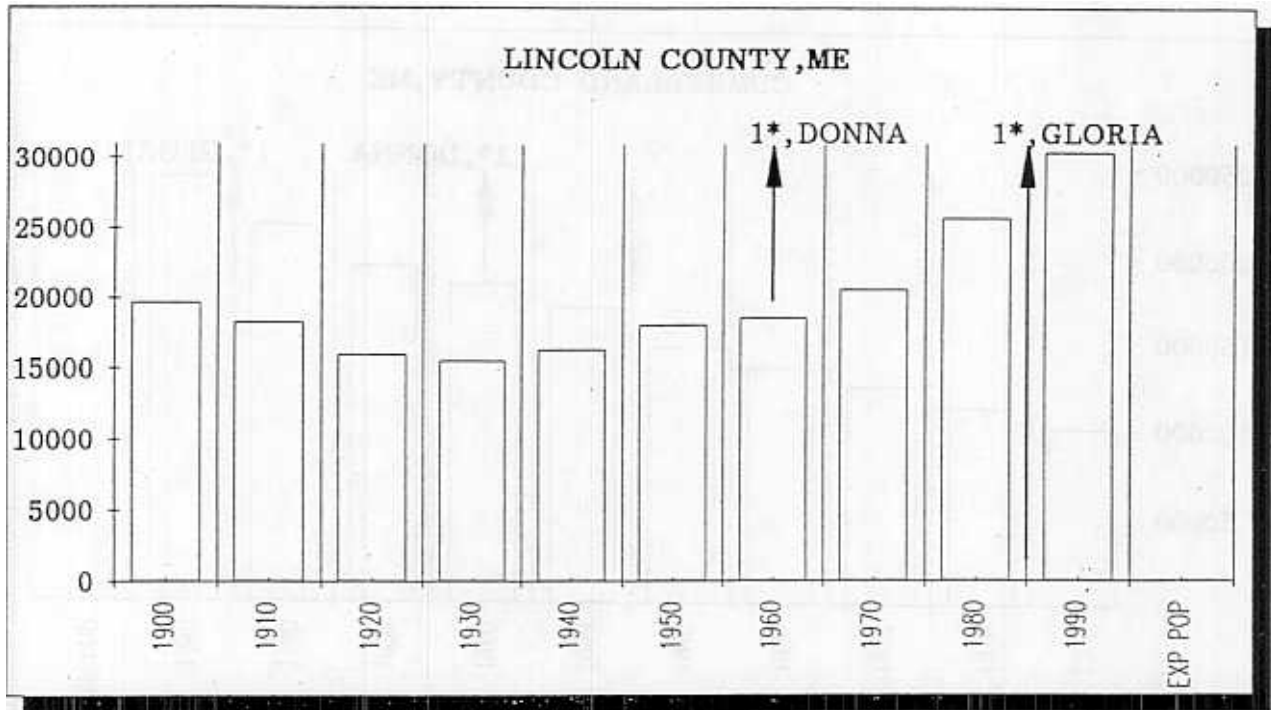
York, Cumberland (Portland), Sagadahoc, Lincoln, Knox,
Waldo, Hancock, Washington (Eastport).

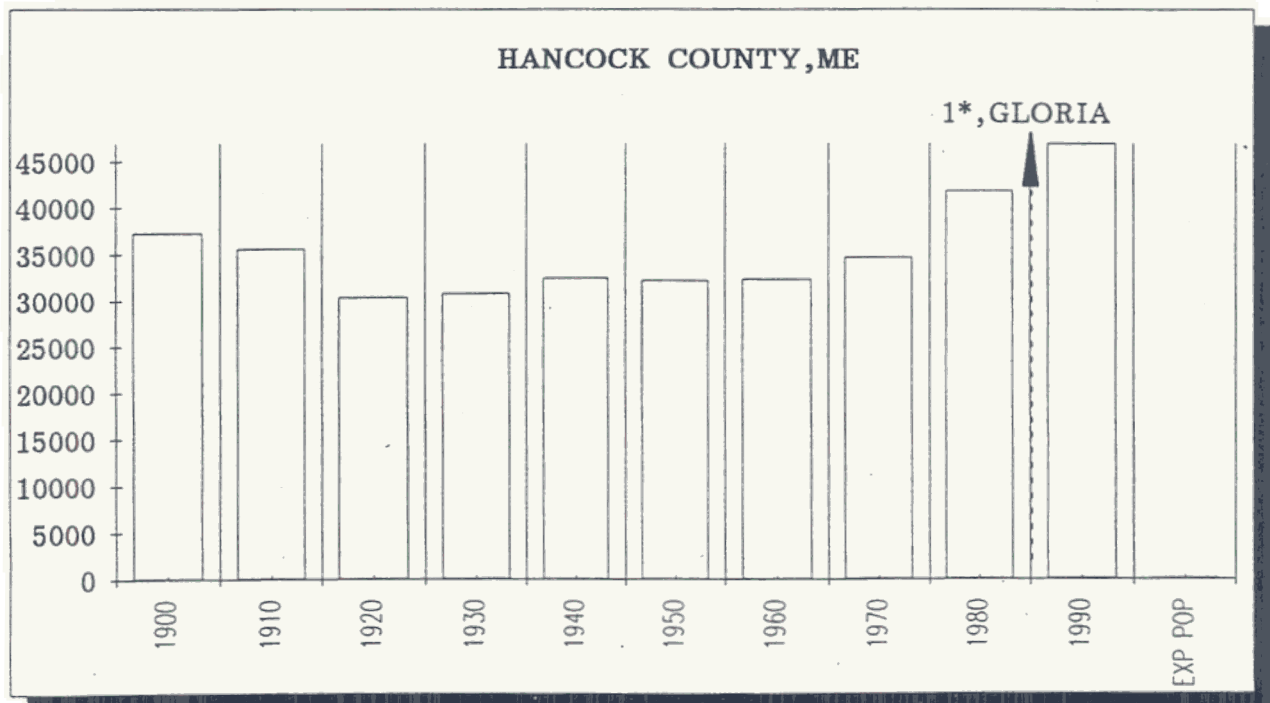
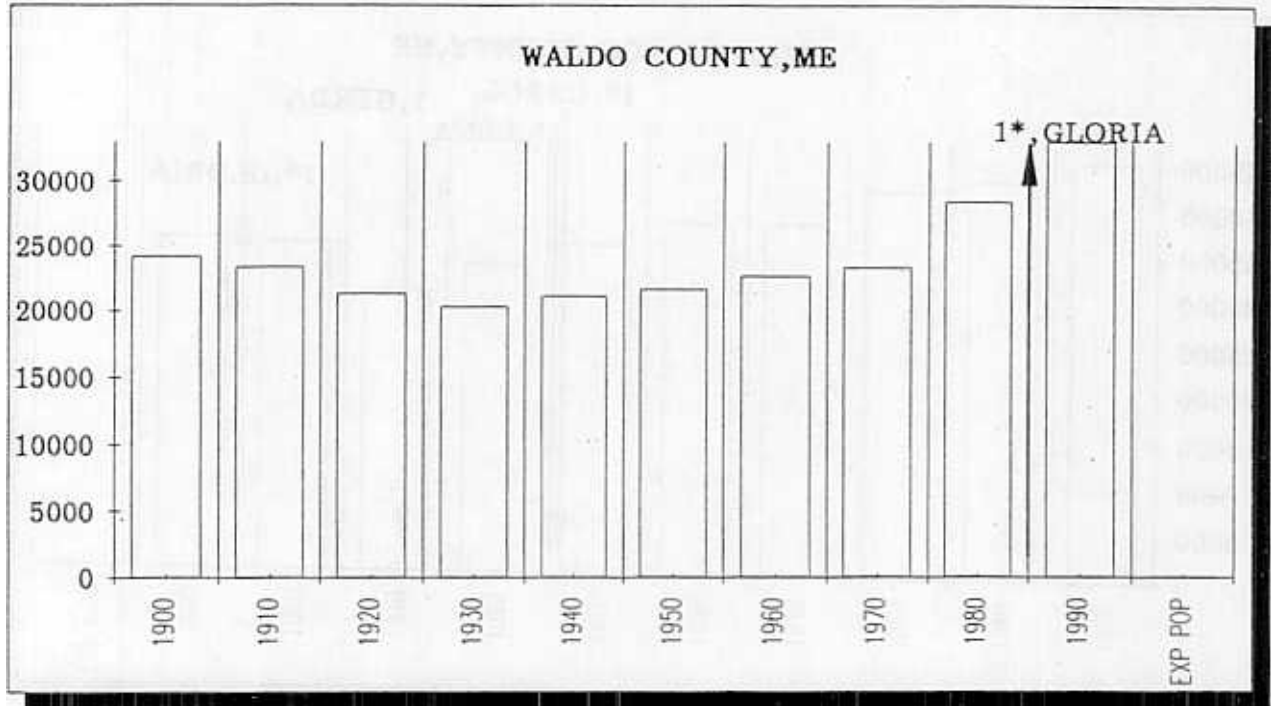
| YEAR | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | EXP POP | % INE | LAST |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|-------|------|
| COUNTY/PARISH | | | | | | | | | | | | | |
| ROCKINGHAM | 51118 | 52188 | 52498 | 53750 | 58142 | 70059 | 99029 | 138951 | 190345 | 245845 | | 100 | |
| NH COASTAL TOTAL | 51118 | 52188 | 52498 | 53750 | 58142 | 70059 | 99029 | 138951 | 190345 | 245845 | 0 | 100 | |
| NH TOTAL | 411588 | 430572 | 443083 | 465293 | 491524 | 533242 | 606921 | 737681 | 920610 | 1109252 | | | |
| COUNTY/PARISH | | | | | | | | | | | | | |
| YORK | 64885 | 68526 | 70696 | 72934 | 82550 | 93541 | 99402 | 111576 | 139666 | 164587 | | 100 | |
| CUMBERLAND | 100689 | 112014 | 124376 | 134645 | 146000 | 169201 | 182751 | 192528 | 215789 | 243135 | | 100 | |
| SAGADAHOC | 20330 | 18574 | 23021 | 16927 | 19123 | 20911 | 22793 | 23452 | 28795 | 33535 | | 100 | |
| LINCOLN | 19669 | 18216 | 15976 | 15498 | 16294 | 18004 | 18497 | 20537 | 25691 | 30357 | | 100 | |
| KNOX | 30406 | 28981 | 26245 | 27693 | 27191 | 28121 | 28575 | 29013 | 32941 | 36310 | | 100 | |
| WALDO | 24185 | 23383 | 21328 | 20286 | 21159 | 21687 | 22632 | 23328 | 28414 | 33018 | | 100 | |
| HANCOCK | 37241 | 35575 | 30361 | 30721 | 32422 | 32105 | 32293 | 34590 | 41781 | 46948 | | 100 | |
| WASHINGTON | 45232 | 42905 | 41709 | 37826 | 37767 | 35187 | 32908 | 29859 | 34963 | 35308 | | 100 | |
| ME COASTAL TOTAL | 342637 | 348174 | 353712 | 356530 | 382506 | 418757 | 439851 | 464883 | 548040 | 623198 | 0 | 100 | |
| ME TOTAL | 694466 | 742371 | 768014 | 797423 | 847226 | 913774 | 969265 | 993722 | 1124660 | 1227928 | | | |

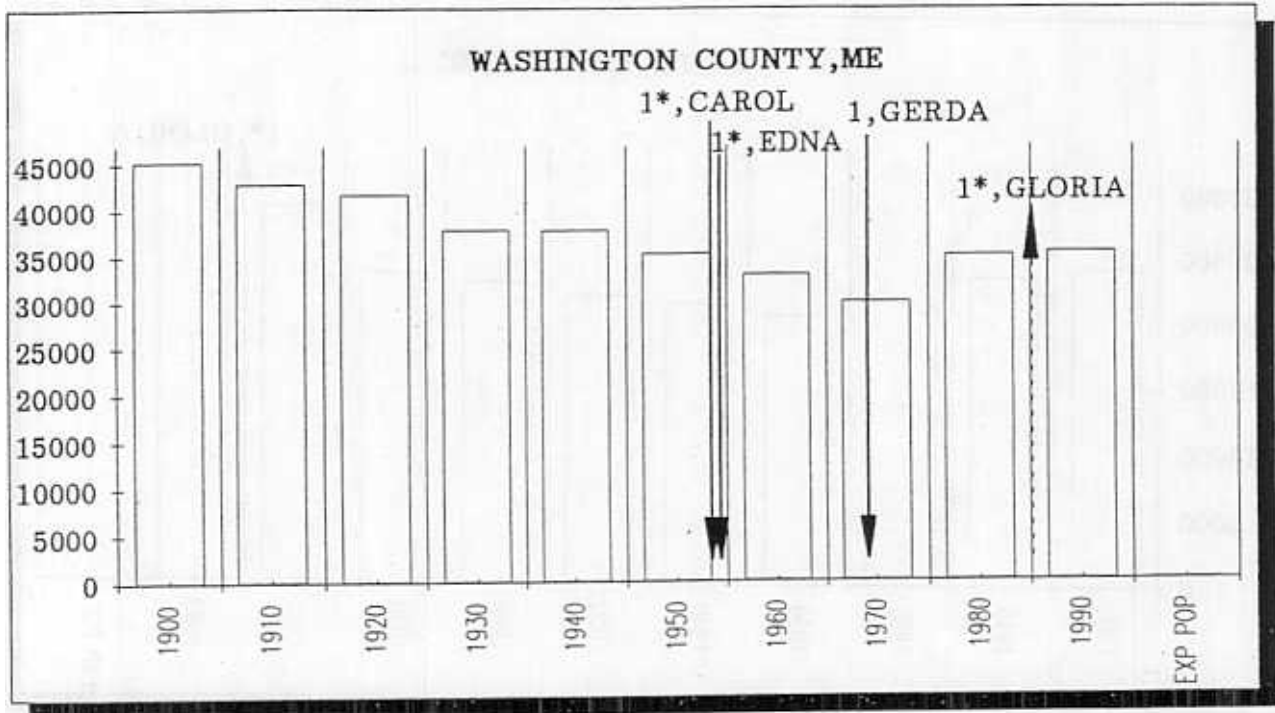












APPENDIX C

A TABULAR HURRICANE CLIMATOLOGY BY COUNTIES, TEXAS TO MAINE, 1900-1990

This climatology is a convenient reference for the hurricane history of individual coastal counties as well as for states. It is apparent at a glance when any particular county was last affected by a hurricane. Also, it can be determined whether a hurricane was large or small by the number of counties affected. The severity of a hurricane, of course, is indicated by its Saffir/Simpson Scale classification. Another useful feature of these tables is that the time between hurricane occurrences is readily apparent both for counties and states.

One point to keep in mind is that while some areas have not experienced a major hurricane during this century, severe hurricanes have been recorded prior to 1900. Examples of this include Savannah, Apalachicola, and New York City, as indicated below.

Savannah: It is obvious at a glance that the Georgia coast has had very few direct hits in this century. However, Savannah was devastated by a severe hurricane (possibly a category 4) in 1893.

Apalachicola: In previous editions of this publication, the following note appeared concerning Apalachicola: "Climatology indicates that Franklin county, Florida (which includes Apalachicola), as well as five adjacent counties, has not received a direct hit by a major hurricane in this century. Here again, records indicate that severe hurricanes have affected that area prior to 1900. In the period from 1894 through 1898, three hurricanes moved within 50 miles of Apalachicola. The 1894 hurricane had winds of 120 mph - a category 3. A total of nine hurricanes moved within 100 miles of Apalachicola during the 13 year period 1886-1898." The validity of this caution was proven when Franklin and Gulf counties were directly hit by hurricane Elena, category 3, in 1985. The statement, and its implied caution, still applies to Wakulla, Jefferson, Taylor, and Dixie counties.

New York City: Early records indicate that a major hurricane affected the New York City area in 1821. This hurricane possibly was as severe as the New England hurricane of 1938. However, New York City has not received a direct hit by a major hurricane during the 20th century. In fact, records indicate that the 1821 hurricane is the only major hurricane whose center passed over a part of New York City in the last 200 years.

The main point to be illustrated by the above examples of hurricanes prior to 1900 is that no particular area along the Gulf or Atlantic coast of the United States is immune to direct hits by major hurricanes, regardless of how the climatology appears to have been in recent years.

The layout of this climatology is chronologically in years, top to bottom, and usually nine counties per page left to right from Texas to Maine. Minimal effort was applied to keep states grouped on the same page, but not at the expense of additional pages. Dual symbols were necessary in illustrating the hurricane climatology. While arrows were used with the graphs in Appendix B, arrows were not appropriate in a tabular presentation such as in this appendix. The key for symbols (non-arrows) is repeated below along with examples of Saffir/Simpson Scale numbers as used in this appendix.

Key for Symbols

Plain Number - Direct Hit

(- Indirect Hit

- Exiting or Inland

* - Forward Speed greater than 30 mph

Examples

- 1 Direct Hit by a Category 1 Hurricane
Indirect Hit (or fringe hit) by a Category 1 Hurricane
- 2 Direct Hit by an Inland or Exiting (moving from land to water) Category 2 Hurricane
- 3* Direct Hit by a Category 3 Hurricane moving greater than 30 mph
Indirect Hit by an exiting Category 3 Hurricane moving greater than 30 mph
Direct Hits by a Category 3 and a Category 2 Hurricane in the same year, with the Category 3 Hurricane occurring first
- (3,1),3 Indirect Hits by Categories 3, and 1 hurricanes followed by a direct hit by a Category 3 Hurricane in the same year. Occurrences were in the order listed.
- E4 Direct Hit by a Category 4 Hurricane in the eastern part of Monroe County, Florida. (An East or West designation was used for Monroe county FL only.)

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY

CAMERON COUNTY TO CALHOUN COUNTY TEXAS

| YEAR | CAMERON | WILLACY | KENEDY | KLEBERG | HUECES | SAN PATRICIO | ARANSAS | REFUGIO | CALHOUN |
|------|---------|---------|--------|---------|--------|--------------|---------|---------|---------|
| 1900 | | | | | | | | | |
| 1901 | | | | | | | | | |
| 1902 | | | | | | | | | |
| 1903 | | | | | | | | | |
| 1904 | | | | | | | | | |
| 1905 | | | | | | | | | |
| 1906 | | | | | | | | | |
| 1907 | | | | | | | | | |
| 1908 | | | | | | | | | |
| 1909 | 2 | (2) | (2) | | | | | | |
| 1910 | (2) | (2) | 2 | 2 | (2) | (2) | | | |
| 1911 | | | | | | | | | |
| 1912 | | | (1) | 1 | 1 | 1 | 1 | 1 | |
| 1913 | | | 1 | 1 | 1 | 1 | (1) | (1) | |
| 1914 | | | | | | | | | |
| 1915 | | | | | | | | | |
| 1916 | | (3) | 3 | 3 | 3 | (3) | | | |
| 1917 | | | | | | | | | |
| 1918 | | | | | | | | | |
| 1919 | (4) | (4) | 4 | 4 | 4 | 4 | 4 | 4 | (4) |
| 1920 | | | | | | | | | |
| 1921 | | | | | | | | | 2 |
| 1922 | | | | | | | | | |
| 1923 | | | | | | | | | |
| 1924 | | | | | | | | | |
| 1925 | | | | | | | | | |
| 1926 | | | | | | | | | |
| 1927 | | | | | | | | | |
| 1928 | | | | | | | | | |
| 1929 | | | | | | | (1) | (1) | 1 |
| 1930 | | | | | | | | | |
| 1931 | | | | | | | | | |
| 1932 | | | | | | | | | |
| 1933 | 2,3 | 2,3 | (2),3 | | | | | | |
| 1934 | | | | | 2 | 2 | 2 | 2 | (2) |
| 1935 | | | | | | | | | |
| 1936 | | | | (1) | 1 | 1 | 1 | 1 | (1) |
| 1937 | | | | | | | | | |
| 1938 | | | | | | | | | |
| 1939 | | | | | | | | | |
| 1940 | | | | | | | | | |
| 1941 | | | | | | | | | |
| 1942 | | | | | (3) | (3) | 3 | 3 | (3) |
| 1943 | | | | | | | | | |
| 1944 | | | | | | | | | |
| 1945 | | | | | 2 | 2 | 2 | 2 | 2 |
| 1946 | | | | | | | | | |
| 1947 | | | | | | | | | |
| 1948 | | | | | | | | | |
| 1949 | | | | | | | | | |
| 1950 | | | | | | | | | |
| 1951 | | | | | | | | | |
| 1952 | | | | | | | | | |
| 1953 | | | | | | | | | |
| 1954 | | | | | | | | | |
| 1955 | | | | | | | | | |
| 1956 | | | | | | | | | |
| 1957 | | | | | | | | | |
| 1958 | | | | | | | | | |
| 1959 | | | | | | | | | |
| 1960 | | | | | | | | | |
| 1961 | | | | | (4) | (4) | 4 | 4 | 4 |
| 1962 | | | | | | | | | |
| 1963 | | | | | | | | | |
| 1964 | | | | | | | | | |
| 1965 | | | | | | | | | |
| 1966 | | | | | | | | | |
| 1967 | 3 | 3 | 3 | 3 | 3 | (3) | (3) | (3) | |
| 1968 | | | | | | | | | |
| 1969 | | | | | | | | | |
| 1970 | | | (3) | (3) | 3 | 3 | 3 | 3 | (3) |
| 1971 | | | (1) | (1) | 1 | 1 | 1 | 1 | 1 |
| 1972 | | | | | | | | | |
| 1973 | | | | | | | | | |
| 1974 | | | | | | | | | |
| 1975 | | | | | | | | | |
| 1976 | | | | | | | | | |
| 1977 | | | | | | | | | |
| 1978 | | | | | | | | | |
| 1979 | | | | | | | | | |
| 1980 | 3 | 3 | (3) | (3) | (3) | (3) | (3) | | |
| 1981 | | | | | | | | | |
| 1982 | | | | | | | | | |
| 1983 | | | | | | | | | |
| 1984 | | | | | | | | | |
| 1985 | | | | | | | | | |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
JACKSON COUNTY, TEXAS TO CAMERON PARISH, LOUISIANA

| YEAR | JACKSON | MATAGORDA | BRAZORIA | GALVESTON | HARRIS | CHAMBERS | JEFFERSON | ORANGE | CAMERON |
|------|---------|-----------|----------|-----------|--------|----------|-----------|--------|---------|
| 1900 | | | 4 | 4 | 4 | 4 | | | |
| 1901 | | | | | | | | | |
| 1902 | | | | | | | | | |
| 1903 | | | | | | | | | |
| 1904 | | | | | | | | | |
| 1905 | | | | | | | | | |
| 1906 | | | | | | | | | |
| 1907 | | | | | | | | | |
| 1908 | | | | | | | | | |
| 1909 | | 3 | 3 | 3 | (3) | (3) | | | |
| 1910 | | | | | | | | | |
| 1911 | | | | | | | | | |
| 1912 | | | | | | | | | |
| 1913 | | | | | | | | | |
| 1914 | | | | | | | | | |
| 1915 | | (4) | 4 | 4 | 4 | 4 | (4) | (4) | |
| 1916 | | | | | | | | | |
| 1917 | | | | | | | | | |
| 1918 | | | | | | | (3) | (3) | |
| 1919 | (4) | (4) | | | | | | | 3 |
| 1920 | | | | | | | | | |
| 1921 | 2 | 2 | (2) | (2) | (2) | | | | |
| 1922 | | | | | | | | | |
| 1923 | | | | | | | | | |
| 1924 | | | | | | | | | |
| 1925 | | | | | | | | | |
| 1926 | | | | | | | | | |
| 1927 | | | | | | | | | |
| 1928 | | | | | | | | | |
| 1929 | 1 | 1 | | | | | | | |
| 1930 | | | | | | | | | |
| 1931 | | | | | | | | | |
| 1932 | | (4) | 4 | (4) | (4) | | | | |
| 1933 | | | | | | | | | |
| 1934 | | | | | | | | | |
| 1935 | | | | | | | | | |
| 1936 | | | | | | | | | |
| 1937 | | | | | | | | | |
| 1938 | | | | | | | | | 1 |
| 1939 | | | | | | | | | |
| 1940 | | | | | | (2) | 2 | 2 | 2 |
| 1941 | (3) | 3 | 3 | 3 | 3 | 3 | (3) | (3) | |
| 1942 | 3 | 3 | (3) | 1 | 1 | 1 | (1) | | |
| 1943 | | | (2) | 2 | 2 | 2 | (2) | | |
| 1944 | | | | | | | | | |
| 1945 | 2 | 2 | (2) | (2) | (2) | | | | |
| 1946 | | | | | | | | | |
| 1947 | | | 1 | 1 | 1 | 1 | | | |
| 1948 | | | | | | | | | |
| 1949 | | 2 | 2 | 2 | 2 | 2 | (2) | (2) | |
| 1950 | | | | | | | | | |
| 1951 | | | | | | | | | |
| 1952 | | | | | | | | | |
| 1953 | | | | | | | | | |
| 1954 | | | | | | | | | |
| 1955 | | | | | | | | | |
| 1956 | | | | | | | | | |
| 1957 | | | | | | | (4) | 4 | 4 |
| 1958 | | | | | | | | | |
| 1959 | | | 1 | 1 | 1 | 1 | | | |
| 1960 | | | | | | | | | |
| 1961 | 4 | 4 | 4 | (4) | (4) | (4) | | | |
| 1962 | | | | | | | | | |
| 1963 | | | | 1 | (1) | 1 | 1 | (1) | (1) |
| 1964 | | | | | | | | | |
| 1965 | | | | | | | | | |
| 1966 | | | | | | | | | |
| 1967 | | | | | | | | | |
| 1968 | | | | | | | | | |
| 1969 | | | | | | | | | |
| 1970 | | | | | | | | | |
| 1971 | 1 | 1 | 1 | (1) | | | | | 2 |
| 1972 | | | | | | | | | |
| 1973 | | | | | | | | | |
| 1974 | | | | | | | | | |
| 1975 | | | | | | | | | |
| 1976 | | | | | | | | | |
| 1977 | | | | | | | | | |
| 1978 | | | | | | | | | |
| 1979 | | | | | | | | | |
| 1980 | | | | | | | | | |
| 1981 | | | | | | | | | |
| 1982 | | | | | | | | | |
| 1983 | | (3) | 3 | 3 | 2 | 3 | (3) | | |
| 1984 | | | | | | | | | |
| 1985 | | | | | | | | | 1,(1) |
| 1986 | | | | | | | 1 | 1 | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | 1,1 | | 1 | 1 | | |
| 1990 | | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY

VERMILION PARISH TO ORLEANS PARISH, LOUISIANA

| YEAR | VERMILION | IBERIA | ST. MARY | TERREBONNE | LAFOURCHE | JEFFERSON | PLAQUEMINES | ST. BERNARD | ORLEANS |
|------|-----------|--------|----------|------------|-----------|-----------|-------------|-------------|---------|
| 1900 | | | | | | | | | |
| 1901 | | | | | | | 2 | 2 | (2) |
| 1902 | | | | | | | | | |
| 1903 | | | | | | | | | |
| 1904 | | | | | | | | | |
| 1905 | | | | | | | | | |
| 1906 | | | | | | | | | |
| 1907 | | | | | | | | | |
| 1908 | | | | | | | | | |
| 1909 | | | | | 4 | 4 | 4 | 4 | 4 |
| 1910 | | | | | | | | | |
| 1911 | | | | | | | | | |
| 1912 | | | | | | | | | |
| 1913 | | | | | | | | | |
| 1914 | | | | | | | | | |
| 1915 | | | | | 4 | 4 | 4 | 4 | 4 |
| 1916 | | | | | | | | | |
| 1917 | | | | | | | | | |
| 1918 | (3) | | | | | | | | |
| 1919 | | | | | | | | | |
| 1920 | | | (2) | 2 | (2) | | | | |
| 1921 | | | | | | | | | |
| 1922 | | | | | | | | | |
| 1923 | | 1 | 1 | (1) | | | | | |
| 1924 | | | | | | | | | |
| 1925 | | | | | | | | | |
| 1926 | | | 3 | 3 | 3 | | | | |
| 1927 | | | | | | | | | |
| 1928 | | | | | | | | | |
| 1929 | | | | | | | | | |
| 1930 | | | | | | | | | |
| 1931 | | | | | | | | | |
| 1932 | | | | | | | | | |
| 1933 | | | | | | | | | |
| 1934 | | | 3 | 3 | (3) | | | | |
| 1935 | | | | | | | | | |
| 1936 | | | | | | | | | |
| 1937 | | | | | | | | | |
| 1938 | 1 | | | | | | | | |
| 1939 | | | | | | | | | |
| 1940 | | | | | | | | | |
| 1941 | | | | | | | | | |
| 1942 | | | | | | | | | |
| 1943 | | | | | | | | | |
| 1944 | | | | | | | | | |
| 1945 | | | | | | | | | |
| 1946 | | | | | | | | | |
| 1947 | | | | | | 3 | 3 | 3 | 3 |
| 1948 | | | | | 1 | 1 | 1 | 1 | 1 |
| 1949 | | | | | | | | | |
| 1950 | | | | | | | | | |
| 1951 | | | | | | | | | |
| 1952 | | | | | | | | | |
| 1953 | | | | | | | | | |
| 1954 | | | | | | | | | |
| 1955 | | | | | | | | | |
| 1956 | | | | | | | 2 | | |
| 1957 | (4) | | | | | | | | |
| 1958 | | | | | | | | | |
| 1959 | | | | | | | | | |
| 1960 | | | | | | | (1) | | |
| 1961 | | | | | | | | | |
| 1962 | | | | | | | | | |
| 1963 | | | | | | | | | |
| 1964 | | (3) | 3 | 3 | (3) | | | | |
| 1965 | | | | (3) | 3 | 3 | 3 | 3 | 3 |
| 1966 | | | | | | | | | |
| 1967 | | | | | | | | | |
| 1968 | | | | | | | | | |
| 1969 | | | | | | | 5 | (5) | (5) |
| 1970 | | | | | | | | | |
| 1971 | 2 | 2 | (2) | | | | | | |
| 1972 | | | | | | | | | |
| 1973 | | | | | | | | | |
| 1974 | (3) | 3 | 3 | 3 | (3) | (3) | | | |
| 1975 | | | | | | | | | |
| 1976 | | | | | | | | | |
| 1977 | | | | 1 | | | | | |
| 1978 | | | | | | | | | |
| 1979 | | | 1 | (1) | | | | | |
| 1980 | | | | | | | | | |
| 1981 | | | | | | | | | |
| 1982 | | | | | | | | | |
| 1983 | | | | | | | | | |
| 1984 | | | | | | | | | |
| 1985 | 1,1 | 1 | 1 | 1 | (1) | (1) | (1) | | |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | 1 | 1 | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
ST. TAMMANY PARISH, LA; MISSISSIPPI; ALABAMA; TO OKALOOSA COUNTY, FL.

| YEAR | ST. TAMMANY | HANCOCK | HARRISON | JACKSON | MOBILE | BALDWIN | ESCAMBIA | SANTA ROSA | OKALOOSA |
|------|-------------|---------|----------|---------|--------|---------|----------|------------|----------|
| 1900 | | | | | | | | | |
| 1901 | (2) | 2 | 2 | 2 | (2) | | | | |
| 1902 | | | | | | | | | |
| 1903 | | | | | | | | | |
| 1904 | | | | | | | | | |
| 1905 | | | | | | | | | |
| 1906 | | | (3) | 3 | 3 | (3) | (3) | | |
| 1907 | | | | | | | | | |
| 1908 | | | | | | | | | |
| 1909 | 4 | (4) | (4) | (4) | | | | | |
| 1910 | | | | | | | | | |
| 1911 | | | | | | 1 | 1 | (1) | |
| 1912 | | | | | | | | | |
| 1913 | | | | | | | | | |
| 1914 | | | | | | | | | |
| 1915 | 4 | (4) | (4) | (4) | | | | | |
| 1916 | | | (3) | 3 | 3,2 | (3),2 | (3),2 | 2 | 2 |
| 1917 | | | | | (3) | (3) | 3 | 3 | 3 |
| 1918 | | | | | | | | | |
| 1919 | | | | | | | | | |
| 1920 | | | | | | | | | |
| 1921 | | | | | | | | | |
| 1922 | | | | | | | | | |
| 1923 | | | | | | | | | |
| 1924 | | | | | | | | | |
| 1925 | | | | | | | | | |
| 1926 | | | | (3) | 3 | 3 | 3 | 3 | (3) |
| 1927 | | | | | | | | | |
| 1928 | | | | | | | | | |
| 1929 | | | | | | | | | |
| 1930 | | | | | | | | | |
| 1931 | | | | | | | | | |
| 1932 | | | | (1) | 1 | (1) | | | |
| 1933 | | | | | | | | | |
| 1934 | | | | | | | | | |
| 1935 | | | | | | | | | |
| 1936 | | | | | | | | | 3 |
| 1937 | | | | | | | | | |
| 1938 | | | | | | | | | |
| 1939 | | | | | | | | | |
| 1940 | | | | | | | | | 1 |
| 1941 | | | | | | | | | |
| 1942 | | | | | | | | | |
| 1943 | | | | | | | | | |
| 1944 | | | | | | | | | |
| 1945 | | | | | | | | | |
| 1946 | | | | | | | | | |
| 1947 | (3) | (3) | (3) | (3) | | | | | |
| 1948 | 1 | (1) | (1) | | | | | | |
| 1949 | | | | | | | | | |
| 1950 | | | | | (1) | 1 | (1) | | |
| 1951 | | | | | | | | | |
| 1952 | | | | | | | | | |
| 1953 | | | | | | | | | |
| 1954 | | | | | | | | | |
| 1955 | | | | | | | | | |
| 1956 | | | | | | | | (1) | 1 |
| 1957 | | | | | | | | | |
| 1958 | | | | | | | | | |
| 1959 | | | | | | | | | |
| 1960 | | | 1 | 1 | | | | | |
| 1961 | | | | | | | | | |
| 1962 | | | | | | | | | |
| 1963 | | | | | | | | | |
| 1964 | | | | | | | | | |
| 1965 | (3) | (3) | (3) | | | | | | |
| 1966 | | | | | | | | | |
| 1967 | | | | | | | | | |
| 1968 | | | | | | | | | |
| 1969 | (5) | 5 | 5 | (5) | | | | | |
| 1970 | | | | | | | | | |
| 1971 | | | | | | | | | |
| 1972 | | | | | | | | | |
| 1973 | | | | | | | | | |
| 1974 | | | | | | | | | |
| 1975 | | | | | | | | (3) | 3 |
| 1976 | | | | | | | | | |
| 1977 | | | | | | | | | |
| 1978 | | | | | | | | | |
| 1979 | | | (3) | 3 | 3 | 3 | (3) | (3) | |
| 1980 | | | | | | | | | |
| 1981 | | | | | | | | | |
| 1982 | | | | | | | | | |
| 1983 | | | | | | | | | |
| 1984 | | | | | | | | | |
| 1985 | | 3 | 3 | 3 | 3 | (3) | | | |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
WALTON COUNTY TO LEVY COUNTY, FLORIDA.

| YEAR | WALTON | BAY | GULF | FRANKLIN | WAKULLA | JEFFERSON | TAYLOR | DIXIE | LEVY |
|------|--------|-----|------|----------|---------|-----------|--------|-------|------|
| 1900 | | | | | | | | | |
| 1901 | | | | | | | | | |
| 1902 | | | | | | | | | |
| 1903 | | 1 | | | | | | | |
| 1904 | | | | | | | | | |
| 1905 | | | | | | | | | |
| 1906 | | | | | | | | | |
| 1907 | | | | | | | | | |
| 1908 | | | | | | | | | |
| 1909 | | | | | | | | | |
| 1910 | | | | | | | | | |
| 1911 | | | | | | | | | |
| 1912 | | | | | | | | | |
| 1913 | | | | | | | | | |
| 1914 | | | | | | | | | |
| 1915 | | 1 | | | | | | | |
| 1916 | (2) | | | | | | | | |
| 1917 | 3 | (3) | | | | | | | |
| 1918 | | | | | | | | | |
| 1919 | | | | | | | | | |
| 1920 | | | | | | | | | |
| 1921 | | | | | | | | | |
| 1922 | | | | | | | | | |
| 1923 | | | | | | | | | |
| 1924 | | 1 | 1 | 1 | (1) | | | | |
| 1925 | | | | | | | | | |
| 1926 | | | | | | | | | |
| 1927 | | | | | | | | | |
| 1928 | | | | | | | | | |
| 1929 | (2) | 2 | 2 | (2) | (2) | | | | |
| 1930 | | | | | | | | | |
| 1931 | | | | | | | | | |
| 1932 | | | | | | | | | |
| 1933 | | | | | | | | | |
| 1934 | | | | | | | | | |
| 1935 | | | | | | | | | |
| 1936 | 3 | (3) | | | | | | 2 | 2 |
| 1937 | | | | | | | | | |
| 1938 | | | | | | | | | |
| 1939 | 1 | 1 | 1 | (1) | | | | | |
| 1940 | | | | | | | | | |
| 1941 | | | (2) | 2 | 2 | | | | |
| 1942 | | | | | | | | | |
| 1943 | | | | | | | | | |
| 1944 | | | | | | | | | |
| 1945 | | | | | | | | | |
| 1946 | | | | | | | | | |
| 1947 | | | | | | | | | |
| 1948 | | | | | | | | | |
| 1949 | | | | | | | | | (1) |
| 1950 | | | | | | | | (3) | 3 |
| 1951 | | | | | | | | | |
| 1952 | | | | | | | | | |
| 1953 | (1) | 1 | | | | | | | |
| 1954 | | | | | | | | | |
| 1955 | | | | | | | | | |
| 1956 | 1 | | | | | | | | |
| 1957 | | | | | | | | | |
| 1958 | | | | | | | | | |
| 1959 | | | | | | | | | |
| 1960 | | | | | | | | | |
| 1961 | | | | | | | | | |
| 1962 | | | | | | | | | |
| 1963 | | | | | | | | | |
| 1964 | | | | | | | | | |
| 1965 | | | | | | | | | |
| 1966 | | | | 2 | 2 | 2 | 2 | (2) | (2) |
| 1967 | | | | | | | | | |
| 1968 | | | | | | | | | |
| 1969 | | | | | | | | | |
| 1970 | | | | | | | | | |
| 1971 | | | | | | | | | |
| 1972 | | (1) | 1 | 1 | (1) | | | | |
| 1973 | | | | | | | | | |
| 1974 | | | | | | | | | |
| 1975 | 3 | 3 | (3) | | | | | | |
| 1976 | | | | | | | | | |
| 1977 | | | | | | | | | |
| 1978 | | | | | | | | | |
| 1979 | | | | | | | | | |
| 1980 | | | | | | | | | |
| 1981 | | | | | | | | | |
| 1982 | | | | | | | | | |
| 1983 | | | | | | | | | |
| 1984 | | | | | | | | | |
| 1985 | | 2 | 3,2 | 3,2 | (2) | (2) | (2) | | (3) |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

**COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
CITRUS COUNTY TO LEE COUNTY, FLORIDA.**

| YEAR | CITRUS | HERNANDO | PASCO | PINELLAS | HILLSBOROUGH | MANATEE | SARASOTA | CHARLOTTE | LEE |
|------|--------|----------|-------|----------|--------------|---------|----------|-----------|-----|
| 1900 | | | | | | | | | |
| 1901 | | | | | | | | | |
| 1902 | | | | | | | | | |
| 1903 | | | | | | | | | |
| 1904 | | | | | | | | | |
| 1905 | | | | | | | | | |
| 1906 | | | | | | | | | |
| 1907 | | | | | | | | | |
| 1908 | | | | | | | | | |
| 1909 | | | | | | | | | |
| 1910 | | | | | | | | 3 | 3 |
| 1911 | | | | | | | | | |
| 1912 | | | | | | | | | |
| 1913 | | | | | | | | | |
| 1914 | | | | | | | | | |
| 1915 | | | | | | | | | |
| 1916 | | | | | | | | | |
| 1917 | | | | | | | | | |
| 1918 | | | | | | | | | |
| 1919 | | | | | | | | | |
| 1920 | | | | | | | | | |
| 1921 | | (3) | 3 | 3 | 3 | 3 | (3) | (3) | (3) |
| 1922 | | | | | | | | | |
| 1923 | | | | | | | | | |
| 1924 | | | | | | | | | |
| 1925 | | | | | | (1) | 1 | 1 | |
| 1926 | | | | | | | (3) | 3 | 3 |
| 1927 | | | | | | | | | |
| 1928 | | | | | | | | | |
| 1929 | | | | | | | | | |
| 1930 | | | | | | | | | |
| 1931 | | | | | | | | | |
| 1932 | | | | | | | | | |
| 1933 | | | | | | | | | |
| 1934 | | | | | | | | | |
| 1935 | | | | (3) | (3) | (3) | (3) | (4) | (4) |
| 1936 | | | | | | | | | |
| 1937 | | | | | | | | | |
| 1938 | | | | | | | | | |
| 1939 | | | | | | | | | |
| 1940 | | | | | | | | | |
| 1941 | | | | | | | | | |
| 1942 | | | | | | | | | |
| 1943 | | | | | | | | | |
| 1944 | | | | (3) | (3) | 3 | 3 | 3 | 3 |
| 1945 | | 1 | 1 | 1 | 1 | | | | |
| 1946 | | | | 1 | 1 | 1 | 1 | (1) | (1) |
| 1947 | | | | | | | | (2) | 2 |
| 1948 | | | | | | | | | |
| 1949 | (1) | (1) | | | | | | | |
| 1950 | 3 | 3 | 3 | (3) | (3) | | | | |
| 1951 | | | | | | | | | |
| 1952 | | | | | | | | | |
| 1953 | | | | | | | | | |
| 1954 | | | | | | | | | |
| 1955 | | | | | | | | | |
| 1956 | | | | | | | | | |
| 1957 | | | | | | | | | |
| 1958 | | | | | | | | | |
| 1959 | | | | | | | | | |
| 1960 | | | | | | | | 3 | 3 |
| 1961 | | | | | | | | | |
| 1962 | | | | | | | | | |
| 1963 | | | | | | | | | |
| 1964 | | | | | | | | | |
| 1965 | | | | | | | | | |
| 1966 | | | | (2) | (2) | (2) | (2) | (2) | (2) |
| 1967 | | | | | | | | | |
| 1968 | 2 | 2 | (2) | (2) | (2) | | | | |
| 1969 | | | | | | | | | |
| 1970 | | | | | | | | | |
| 1971 | | | | | | | | | |
| 1972 | | | | | | | | | |
| 1973 | | | | | | | | | |
| 1974 | | | | | | | | | |
| 1975 | | | | | | | | | |
| 1976 | | | | | | | | | |
| 1977 | | | | | | | | | |
| 1978 | | | | | | | | | |
| 1979 | | | | | | | | | |
| 1980 | | | | | | | | | |
| 1981 | | | | | | | | | |
| 1982 | | | | | | | | | |
| 1983 | | | | | | | | | |
| 1984 | | | | | | | | | |
| 1985 | | | | | | | | | |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
COLLIER COUNTY TO MARTIN COUNTY, FLORIDA

| YEAR | COLLIER | MONROE | DADE | BROWARD | PALM BEACH | HENDRY | GLADES | OKEECHOBEE | MARTIN |
|------|---------|---------|-------|---------|------------|--------|--------|------------|--------|
| 1900 | | | | | | | | | |
| 1901 | | | | | | | | | |
| 1902 | | | | | | | | | |
| 1903 | | | | 2 | 2 | 1 | 1 | | (2) |
| 1904 | | | | | | | | | |
| 1905 | | | | | | | | | |
| 1906 | | E1,2 | 1,2 | (1),2 | (1,2) | | | | (1) |
| 1907 | | | | | | | | | |
| 1908 | | | | | | | | | |
| 1909 | | E3 | (3) | | | | | | |
| 1910 | 3 | W3 | | | | 2 | 2 | | |
| 1911 | | | | | | | | | |
| 1912 | | | | | | | | | |
| 1913 | | | | | | | | | |
| 1914 | | | | | | | | | |
| 1915 | | | | | | | | | |
| 1916 | | W1 | | | | | | | |
| 1917 | | | | | | | | | |
| 1918 | | | | | | | | | |
| 1919 | | W4 | | | | | | | |
| 1920 | | | | | | | | | |
| 1921 | | | | | | | | | |
| 1922 | | | | | | | | | |
| 1923 | | | | | | | | | |
| 1924 | 1 | W1 | | | | | | | |
| 1925 | | | | | | | | | |
| 1926 | 3 | E(3) | 4,(3) | 4 | (4) | 3 | 3 | (3) | (4) |
| 1927 | | | | | | | | | |
| 1928 | | | (4) | (2,4) | 2,4 | 4 | 4 | 4 | 2,4 |
| 1929 | 3 | E3 | 3 | | | | | | |
| 1930 | | | | | | | | | |
| 1931 | | | | | | | | | |
| 1932 | | | | | | | | | |
| 1933 | | E(1) | (1) | (3) | 3 | (2) | (2) | 2 | 3 |
| 1934 | | | | | | | | | |
| 1935 | (4) | E5,W(1) | (5),2 | 2 | | | | | |
| 1936 | | | | | | | | | |
| 1937 | | | | | | | | | |
| 1938 | | | | | | | | | |
| 1939 | | | | | | | | | 1 |
| 1940 | | | | | | | | | |
| 1941 | 2 | E(2) | 2 | | | | | | |
| 1942 | | | | | | | | | |
| 1943 | | | | | | | | | |
| 1944 | (3) | W(3) | | | | | | | |
| 1945 | | E3 | 3 | (3) | | 2 | 2 | (2) | |
| 1946 | | | | | | | | | |
| 1947 | 2 | 2 | (4),1 | 4,1 | 4 | 3 | (3) | (3) | (4) |
| 1948 | 3 | W3,2 | (3),2 | (3,2) | 2 | 2 | (2) | | 2 |
| 1949 | | | (3) | (3) | 3 | (3) | (3) | 3 | 3 |
| 1950 | | W(3) | 3 | 3 | (3) | 2 | 2 | 2 | (3) |
| 1951 | | | | | | | | | |
| 1952 | | | | | | | | | |
| 1953 | | | | | | | | | |
| 1954 | | | | | | | | | |
| 1955 | | | | | | | | | |
| 1956 | | | | | | | | | |
| 1957 | | | | | | | | | |
| 1958 | | | | | | | | | |
| 1959 | | | | | | | | | |
| 1960 | 4 | E4 | (4) | (4) | | (2) | (2) | (2) | |
| 1961 | | | | | | | | | |
| 1962 | | | | | | | | | |
| 1963 | | | | | | | | | |
| 1964 | 2 | W(2) | 2 | 2 | 2,2 | (2) | | | 1,2 |
| 1965 | (3) | E3 | (3) | (3) | | | | | |
| 1966 | | 1 | | | | | | | |
| 1967 | | | | | | | | | |
| 1968 | | | | | | | | | |
| 1969 | | | | | | | | | |
| 1970 | | | | | | | | | |
| 1971 | | | | | | | | | |
| 1972 | | | | | | | | | |
| 1973 | | | | | | | | | |
| 1974 | | | | | | | | | |
| 1975 | | | | | | | | | |
| 1976 | | | | | | | | | |
| 1977 | | | | | | | | | |
| 1978 | | | | | | | | | |
| 1979 | | | | | 2 | | | | 2 |
| 1980 | | | | | | | | | |
| 1981 | | | | | | | | | |
| 1982 | | | | | | | | | |
| 1983 | | | | | | | | | |
| 1984 | | | | | | | | | |
| 1985 | | W(2) | | | | | | | |
| 1986 | | | | | | | | | |
| 1987 | | W1 | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

**COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
ST. LUCIE COUNTY TO NASSAU COUNTY, FLORIDA.**

| YEAR | ST.LUCIE | INDIAN RIV. | BREVARD | VOLUSIA | FLAGLER | ST.JOHN | DUVAL | NASSAU |
|------|----------|-------------|---------|---------|---------|---------|-------|--------|
| 1900 | | | | | | | | |
| 1901 | | | | | | | | |
| 1902 | | | | | | | | |
| 1903 | | | | | | | | |
| 1904 | | | | | | | | |
| 1905 | | | | | | | | |
| 1906 | | | | | | | | |
| 1907 | | | | | | | | |
| 1908 | | | | | | | | |
| 1909 | | | | | | | | |
| 1910 | | | | | | | | |
| 1911 | | | | | | | | |
| 1912 | | | | | | | | |
| 1913 | | | | | | | | |
| 1914 | | | | | | | | |
| 1915 | | | | | | | | |
| 1916 | | | | | | | | |
| 1917 | | | | | | | | |
| 1918 | | | | | | | | |
| 1919 | | | | | | | | |
| 1920 | | | | | | | | |
| 1921 | | | (2) | 2 | 2 | | | |
| 1922 | | | | | | | | |
| 1923 | | | | | | | | |
| 1924 | | | | | | | | |
| 1925 | | | | | | | | |
| 1926 | (4),2 | (4),2 | 2 | 2 | (2) | | | |
| 1927 | | | | | | | | |
| 1928 | (2),4 | (4) | (4) | | | | 2 | 2 |
| 1929 | | | | | | | | |
| 1930 | | | | | | | | |
| 1931 | | | | | | | | |
| 1932 | | | | | | | | |
| 1933 | 1,3 | 1,(3) | (1,3) | | | | | |
| 1934 | | | | | | | | |
| 1935 | | | | | | | | |
| 1936 | | | | | | | | |
| 1937 | | | | | | | | |
| 1938 | | | | | | | | |
| 1939 | 1 | (1) | (1) | | | | | |
| 1940 | | | | | | | | |
| 1941 | | | | | | | | |
| 1942 | | | | | | | | |
| 1943 | | | | | | | | |
| 1944 | | | | (2) | (2) | 2 | 2 | (2) |
| 1945 | | | | | | | | |
| 1946 | | | | | | | | |
| 1947 | (4) | (4) | (4) | (4) | | | | |
| 1948 | | | | | | | | |
| 1949 | (3) | (3) | (3) | | | | | |
| 1950 | | | | | | | | |
| 1951 | | | | | | | | |
| 1952 | | | | | | | | |
| 1953 | | | | | | | | |
| 1954 | | | | | | | | |
| 1955 | | | | | | | | |
| 1956 | | | | | | | | |
| 1957 | | | | | | | | |
| 1958 | | | | | | | | |
| 1959 | | | | | | | | |
| 1960 | | | | 2 | 2 | 2 | (2) | |
| 1961 | | | | | | | | |
| 1962 | | | | | | | | |
| 1963 | | | | | | | | |
| 1964 | 1 | 1 | (1) | | (2) | 2 | 2 | (2) |
| 1965 | | | | | | | | |
| 1966 | | | | | | | | |
| 1967 | | | | | | | | |
| 1968 | | | | | 1 | 1 | | |
| 1969 | | | | | | | | |
| 1970 | | | | | | | | |
| 1971 | | | | | | | | |
| 1972 | | | | | | | | |
| 1973 | | | | | | | | |
| 1974 | | | | | | | | |
| 1975 | | | | | | | | |
| 1976 | | | | | | | | |
| 1977 | | | | | | | | |
| 1978 | | | | | | | | |
| 1979 | 2 | 2 | 2 | (2) | | | | |
| 1980 | | | | | | | | |
| 1981 | | | | | | | | |
| 1982 | | | | | | | | |
| 1983 | | | | | | | | |
| 1984 | | | | | | | | |
| 1985 | | | | | | | | |
| 1986 | | | | | | | | |
| 1987 | | | | | | | | |
| 1988 | | | | | | | | |
| 1989 | | | | | | | | |
| 1990 | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY

GEORGIA

| YEAR | CAMDEN | GLYNN | MCINTOSH | LIBERTY | BRYAN | CHATHAM |
|------|--------|-------|----------|---------|-------|---------|
| 1900 | | | | | | |
| 1901 | | | | | | |
| 1902 | | | | | | |
| 1903 | | | | | | |
| 1904 | | | | | | |
| 1905 | | | | | | |
| 1906 | | | | | | |
| 1907 | | | | | | |
| 1908 | | | | | | |
| 1909 | | | | | | |
| 1910 | | | | | | |
| 1911 | | | | | | 2 |
| 1912 | | | | | | |
| 1913 | | | | | | |
| 1914 | | | | | | |
| 1915 | | | | | | |
| 1916 | | | | | | |
| 1917 | | | | | | |
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| 1919 | | | | | | |
| 1920 | | | | | | |
| 1921 | | | | | | |
| 1922 | | | | | | |
| 1923 | | | | | | |
| 1924 | | | | | | |
| 1925 | | | | | | |
| 1926 | | | | | | |
| 1927 | | | | | | |
| 1928 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1929 | | | | | | |
| 1930 | | | | | | |
| 1931 | | | | | | |
| 1932 | | | | | | |
| 1933 | | | | | | |
| 1934 | | | | | | |
| 1935 | | | | | | |
| 1936 | | | | | | |
| 1937 | | | | | | |
| 1938 | | | | | | |
| 1939 | | | | | | |
| 1940 | | | | | | 2 |
| 1941 | | | | | | |
| 1942 | | | | | | |
| 1943 | | | | | | |
| 1944 | | | | | | |
| 1945 | | | | | | |
| 1946 | | | | | | |
| 1947 | | | | (2) | 2 | 2 |
| 1948 | | | | | | |
| 1949 | | | | | | |
| 1950 | | | | | | |
| 1951 | | | | | | |
| 1952 | | | | | | |
| 1953 | | | | | | |
| 1954 | | | | | | |
| 1955 | | | | | | |
| 1956 | | | | | | |
| 1957 | | | | | | |
| 1958 | | | | | | |
| 1959 | | | | | | |
| 1960 | | | | | | |
| 1961 | | | | | | |
| 1962 | | | | | | |
| 1963 | | | | | | |
| 1964 | (2) | | | | | |
| 1965 | | | | | | |
| 1966 | | | | | | |
| 1967 | | | | | | |
| 1968 | | | | | | |
| 1969 | | | | | | |
| 1970 | | | | | | |
| 1971 | | | | | | |
| 1972 | | | | | | |
| 1973 | | | | | | |
| 1974 | | | | | | |
| 1975 | | | | | | |
| 1976 | | | | | | |
| 1977 | | | | | | |
| 1978 | | | | | | |
| 1979 | | | | | | 2 |
| 1980 | | | | | | |
| 1981 | | | | | | |
| 1982 | | | | | | |
| 1983 | | | | | | |
| 1984 | | | | | | |
| 1985 | | | | | | |
| 1986 | | | | | | |
| 1987 | | | | | | |
| 1988 | | | | | | |
| 1989 | | | | | | |
| 1990 | | | | | | |

**COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
SOUTH CAROLINA TO ONSLOW COUNTY, NORTH CAROLINA.**

| YEAR | BEAUFORT | COLLETON | CHARLESTON | GEORGETOWN | HORRY | BRUNSWICK | NEW HANOVER | PENDER | ONSLOW |
|------|----------|----------|------------|------------|-------|-----------|-------------|--------|---------|
| 1900 | | | | | | | | | |
| 1901 | | | | | | | | | |
| 1902 | | | | | | | | | |
| 1903 | | | | | | | | | |
| 1904 | | | | | | | | | |
| 1905 | | | | | | | | | |
| 1906 | | | | (3) | 3 | 3 | (3) | (3) | |
| 1907 | | | | | | | | | |
| 1908 | | | | | | | | | |
| 1909 | | | | | | | | | |
| 1910 | | | | | | | | | |
| 1911 | 2 | 2 | (2) | | | | | | |
| 1912 | | | | | | | | | |
| 1913 | | | | | | | | | |
| 1914 | | | | | | | | | |
| 1915 | | | | | | | | | |
| 1916 | | | 1 | 1 | | | | | |
| 1917 | | | | | | | | | |
| 1918 | | | | | | | | | |
| 1919 | | | | | | | | | |
| 1920 | | | | | | 1 | 1 | (1) | |
| 1921 | | | | | | | | | |
| 1922 | | | | | | | | | |
| 1923 | | | | | | | | | |
| 1924 | | | | | | | | | |
| 1925 | | | | | | | | | |
| 1926 | | | | | | | | | |
| 1927 | | | | | | | | | |
| 1928 | 1 | 1 | 1 | 1 | 1 | | | | |
| 1929 | | | | | | | | | |
| 1930 | | | | | | | | | |
| 1931 | | | | | | | | | |
| 1932 | | | | | | | | | |
| 1933 | | | | | | | | | |
| 1934 | | | | | | | | | |
| 1935 | | | | | | | | | |
| 1936 | | | | | | | | | |
| 1937 | | | | | | | | | |
| 1938 | | | | | | | | | |
| 1939 | | | | | | | | | |
| 1940 | 2 | (2) | (2) | | | | | | |
| 1941 | | | | | | | | | |
| 1942 | | | | | | | | | |
| 1943 | | | | | | | | | |
| 1944 | | | | | | 1 | 1 | 1 | (1) |
| 1945 | | | | | | | | | |
| 1946 | | | | | | | | | |
| 1947 | 2 | (2) | (2) | | | | | | |
| 1948 | | | | | | | | | |
| 1949 | | | | | | | | | |
| 1950 | | | | | | | | | |
| 1951 | | | | | | | | | |
| 1952 | 1 | 1 | 1 | | | | | | |
| 1953 | | | | | | | | | |
| 1954 | | | | (4*) | 4* | 4* | 4* | 4* | (4*) |
| 1955 | | | | | | 1 | 1 | 1 | (3,1,3) |
| 1956 | | | | | | | | | |
| 1957 | | | | | | | | | |
| 1958 | | | | | | (3) | (3) | (3) | (3) |
| 1959 | 3 | 3 | 1,3 | 1,(3) | | 3* | 3* | 3* | 3* |
| 1960 | | | | | | | | | |
| 1961 | | | | | | | | | |
| 1962 | | | | | | | | | |
| 1963 | | | | | | | | | |
| 1964 | | | | | | | | | |
| 1965 | | | | | | | | | |
| 1966 | | | | | | | | | |
| 1967 | | | | | | | | | |
| 1968 | | | | | | | | | |
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| 1971 | | | | | | | | | |
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| 1974 | | | | | | | | | |
| 1975 | | | | | | | | | |
| 1976 | | | | | | | | | |
| 1977 | | | | | | | | | |
| 1978 | | | | | | | | | |
| 1979 | 2 | (2) | | | | | | | |
| 1980 | | | | | | | | | |
| 1981 | | | | | | | | | |
| 1982 | | | | | | | | | |
| 1983 | | | | | | | | | |
| 1984 | | | | | | 2 | 2 | | |
| 1985 | 1 | | | | | | | | |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | 4 | 4 | (4) | | | | |
| 1990 | | | | | | | | | |

**COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
CARTERET COUNTY TO CHOWAN COUNTY, NORTH CAROLINA.**

| YEAR | CARTERET | PAHLICO | BEAUFORT | HYDE | DARE | TYRRELL | WASHINGTON | BERTIE | CHOWAN |
|------|----------|---------|----------|-------|-------|---------|------------|--------|--------|
| 1900 | | | | | | | | | |
| 1901 | | | | | 1 | | | | |
| 1902 | | | | | | | | | |
| 1903 | | | | | (1) | | | | |
| 1904 | | | | | | | | | |
| 1905 | | | | | | | | | |
| 1906 | | | | | | | | | |
| 1907 | | | | | | | | | |
| 1908 | 1 | (1) | (1) | 1 | 1 | (1) | | | |
| 1909 | | | | | | | | | |
| 1910 | | | | | | | | | |
| 1911 | | | | | | | | | |
| 1912 | | | | | | | | | |
| 1913 | 1 | 1 | | 1 | 1 | | | | |
| 1914 | | | | | | | | | |
| 1915 | | | | | | | | | |
| 1916 | | | | | | | | | |
| 1917 | | | | | | | | | |
| 1918 | | | | | | | | | |
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| 1921 | | | | | | | | | |
| 1922 | | | | | | | | | |
| 1923 | | | | | | | | | |
| 1924 | | | | | (2) | | | | |
| 1925 | | | | | | | | | |
| 1926 | | | | | | | | | |
| 1927 | | | | | | | | | |
| 1928 | | | | | | | | | |
| 1929 | | | | | | | | | |
| 1930 | | | | | | | | | |
| 1931 | | | | | | | | | |
| 1932 | | | | | | | | | |
| 1933 | 3 | (3) | (3) | (2),3 | 2,3 | 2,(3) | (2) | | (2) |
| 1934 | | | | | | | | | |
| 1935 | | | | | | | | | |
| 1936 | | | | | 2 | | | | |
| 1937 | | | | | | | | | |
| 1938 | | | | | | | | | |
| 1939 | | | | | | | | | |
| 1940 | | | | | | | | | |
| 1941 | | | | | | | | | |
| 1942 | | | | | | | | | |
| 1943 | | | | | | | | | |
| 1944 | (3*) | | | 3* | 3* | (3*) | | | |
| 1945 | | | | | | | | | |
| 1946 | | | | | | | | | |
| 1947 | | | | | | | | | |
| 1948 | | | | | | | | | |
| 1949 | | | | 1 | 1 | | | | |
| 1950 | | | | | | | | | |
| 1951 | | | | | | | | | |
| 1952 | | | | | | | | | |
| 1953 | 1 | 1 | (1) | 1 | 1 | 1 | | | |
| 1954 | (2) | | | (2) | 2,(3) | | | | |
| 1955 | (3,3) | 3,(3) | (2,2) | 3,3 | 3,3 | 2,2 | (2,2) | | (2,2) |
| 1956 | | | | | | | | | |
| 1957 | | | | | | | | | |
| 1958 | (3) | | | (3) | (3) | | | | |
| 1959 | | | | | | | | | |
| 1960 | 3* | 3* | 3* | 3* | 3* | 3* | 3* | (3*) | (3*) |
| 1961 | | | | | | | | | |
| 1962 | | | | | | | | | |
| 1963 | | | | | | | | | |
| 1964 | | | | | | | | | |
| 1965 | | | | | | | | | |
| 1966 | | | | | | | | | |
| 1967 | | | | | | | | | |
| 1968 | | | | (1) | (1) | | | | |
| 1969 | | | | | | | | | |
| 1970 | | | | | | | | | |
| 1971 | 1 | (1) | | (1) | | | | | |
| 1972 | | | | | | | | | |
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| 1983 | | | | | | | | | |
| 1984 | | | | | | | | | |
| 1985 | (3*) | (3*) | | 3* | 3* | | | | |
| 1986 | 1 | 1 | | 1 | 1 | 1 | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

**COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
PERQUIMANS COUNTY, NORTH CAROLINA TO SURRY COUNTY, VIRGINIA.**

| YEAR | PERQUIMANS | PASQUOTANK | CAMDEN | CURRITUCK | VA. BEACH | CHESAPEAKE | SUFFOLK | I. OF WIGHT | SURRY |
|------|------------|------------|--------|-----------|-----------|------------|---------|-------------|-------|
| 1900 | | | | | | | | | |
| 1901 | | | | 1 | | | | | |
| 1902 | | | | | | | | | |
| 1903 | | | | | | | | | |
| 1904 | | | | | | | | | |
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| 1906 | | | | | | | | | |
| 1907 | | | | | | | | | |
| 1908 | | | | (1) | | | | | |
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| 1921 | | | | | | | | | |
| 1922 | | | | | | | | | |
| 1923 | | | | | | | | | |
| 1924 | | | | (2) | (2) | | | | |
| 1925 | | | | | | | | | |
| 1926 | | | | | | | | | |
| 1927 | | | | | | | | | |
| 1928 | | | | | | | | | |
| 1929 | | | | | | | | | |
| 1930 | | | | | | | | | |
| 1931 | | | | | | | | | |
| 1932 | | | | | | | | | |
| 1933 | 2 | 2 | 2 | 2,(3) | 2,(3) | 2,(3) | 2 | 2 | 2 |
| 1934 | | | | | | | | | |
| 1935 | | | | | | | | | |
| 1936 | | | | (2) | (2) | (2) | (2) | | |
| 1937 | | | | | | | | | |
| 1938 | | | | | | | | | |
| 1939 | | | | | | | | | |
| 1940 | | | | | | | | | |
| 1941 | | | | | | | | | |
| 1942 | | | | | | | | | |
| 1943 | | | | | | | | | |
| 1944 | (3*) | (3*) | 3* | 3* | 3* | (3*) | (3*) | (3*) | |
| 1945 | | | | | | | | | |
| 1946 | | | | | | | | | |
| 1947 | | | | | | | | | |
| 1948 | | | | | | | | | |
| 1949 | | | | | | | | | |
| 1950 | | | | | | | | | |
| 1951 | | | | | | | | | |
| 1952 | | | | | | | | | |
| 1953 | (1) | (1) | 1 | 1 | (1) | (1) | | | |
| 1954 | | | | (2) | (2*) | (2*) | (2*) | (2*) | (2*) |
| 1955 | (2,2) | 2,(2) | 2,(2) | 2,(2) | 1 | 1 | 1 | 1 | 1 |
| 1956 | | | | | | | | | |
| 1957 | | | | | | | | | |
| 1958 | | | | | | | | | |
| 1959 | | | | | | | | | |
| 1960 | 3* | 3* | 3* | 3* | (3*) | | | | |
| 1961 | | | | | | | | | |
| 1962 | | | | | | | | | |
| 1963 | | | | | | | | | |
| 1964 | | | | | | | | | |
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| 1983 | | | | | | | | | |
| 1984 | | | | | | | | | |
| 1985 | | | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) |
| 1986 | | | | 1 | 1 | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

| COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY | | | | | | | | | |
|---|------------|------|------------|---------|-----------|-----------|-------------|-------------|-------------|
| JAMES CITY COUNTY THROUGH NORTHAMPTON COUNTY, VIRGINIA | | | | | | | | | |
| YEAR | JAMES CITY | YORK | GLOUCESTER | MATHEWS | MIDDLESEX | LANCASTER | N'UMBERLAND | WESTMORLAND | NORTHAMPTON |
| 1900 | | | | | | | | | |
| 1901 | | | | | | | | | |
| 1902 | | | | | | | | | |
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| 1932 | | | | | | | | | |
| 1933 | 1 | 2 | 1 | | | | | | (2) |
| 1934 | | | | | | | | | |
| 1935 | | | | | | | | | |
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| 1943 | | | | | | | | | |
| 1944 | | (3*) | | | | | | | (3*) |
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| 1950 | | | | | | | | | |
| 1951 | | | | | | | | | |
| 1952 | | | | | | | | | |
| 1953 | | | | | | | | | |
| 1954 | (2*) | (2*) | (2*) | (2*) | (2*) | (2*) | (2*) | (2*) | |
| 1955 | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 |
| 1956 | | | | | | | | | |
| 1957 | | | | | | | | | |
| 1958 | | | | | | | | | |
| 1959 | | | | | | | | | |
| 1960 | | | | | | | | | (3*) |
| 1961 | | | | | | | | | |
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| 1982 | | | | | | | | | |
| 1983 | | | | | | | | | |
| 1984 | | | | | | | | | |
| 1985 | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) |
| 1986 | | | | | | | | | 1 |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
ACCOMACK COUNTY, VIRGINIA TO CECIL COUNTY, MARYLAND.

| YEAR | ACCOMACK | WORCESTER | SOMERSET | ST. MARYS | CALVERT | A. ARUNDEL | BALTIMORE | HARFORD | CECIL |
|------|----------|-----------|----------|-----------|---------|------------|-----------|---------|-------|
| 1900 | | | | | | | | | |
| 1901 | | | | | | | | | |
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| 1943 | | | | | | | | | |
| 1944 | (3*) | (3*) | | | | | | | |
| 1945 | | | | | | | | | |
| 1946 | | | | | | | | | |
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| 1952 | | | | | | | | | |
| 1953 | | | | | | | | | |
| 1954 | | | | 2* | (2*) | (2*) | (2*) | | |
| 1955 | (1) | | | | | | | | |
| 1956 | | | | | | | | | |
| 1957 | | | | | | | | | |
| 1958 | | | | | | | | | |
| 1959 | | | | | | | | | |
| 1960 | (3*) | (3*) | | | | | | | |
| 1961 | | | | | | | | | |
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| 1963 | | | | | | | | | |
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| 1984 | | | | | | | | | |
| 1985 | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
KENT COUNTY, MARYLAND THROUGH DELAWARE

| YEAR | KENT | QUEEN ANNES | TALBOT | CAROLINE | DORCHESTER | WICOMICO | SUSSEX | KENT | NEW CASTLE |
|------|------|-------------|--------|----------|------------|----------|--------|------|------------|
| 1900 | | | | | | | | | |
| 1901 | | | | | | | | | |
| 1902 | | | | | | | | | |
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| 1944 | | | | | | | (3*) | | |
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| 1960 | | | | | | | (3*) | | |
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| 1983 | | | | | | | | | |
| 1984 | | | | | | | | | |
| 1985 | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY
SALEM COUNTY TO HUDSON COUNTY, NEW JERSEY.

| YEAR | SALEM | CUMBERLAND | CAPE MAY | ATLANTIC | BURLINGTON | OCEAN | MONMOUTH | MIDDLESEX | HUDSON |
|------|-------|------------|----------|----------|------------|-------|----------|-----------|--------|
| 1900 | | | | | | | | | |
| 1901 | | | | | | | | | |
| 1902 | | | | | | | | | |
| 1903 | | | 1 | 1 | 1 | 1 | 1 | | |
| 1904 | | | | | | | | | |
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| 1924 | | | (2) | (2) | (2) | (2) | | | |
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| 1944 | | | (3*) | (3*) | (3*) | (3*) | (3*) | | |
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| 1960 | | | (3*) | (3*) | (3*) | (3*) | (3*) | | |
| 1961 | | | | | | | | | |
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| 1984 | | | | | | | | | |
| 1985 | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
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| 1990 | | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY

BERGEN COUNTY, NEW JERSEY AND NEW YORK

| YEAR | BERGEN | RICHMOND | NEW YORK | KINGS | QUEENS | NASSAU | SUFFOLK | BRONX | WESTCHESTER |
|------|--------|----------|----------|-------|--------|--------|---------|-------|-------------|
| 1900 | | | | | | | | | |
| 1901 | | | | | | | | | |
| 1902 | | | | | | | | | |
| 1903 | | | 1 | 1 | 1 | 1 | (1) | 1 | |
| 1904 | | | | | | | | | |
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| 1938 | | | (3*) | (3*) | (3*) | (3*) | 3* | (3*) | (3*) |
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| 1941 | | | | | | | | | |
| 1942 | | | | | | | | | |
| 1943 | | | | | | | | | |
| 1944 | | | (3*) | (3*) | (3*) | (3*) | 3* | (3*) | (3*) |
| 1945 | | | | | | | | | |
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| 1954 | | | | | | (3*) | 3* | | |
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| 1971 | | | | | | | | | |
| 1972 | | | | | | 1 | (1) | | |
| 1973 | | | | | | | | | |
| 1974 | | | | | | | | | |
| 1975 | | | | | | | | | |
| 1976 | | | | | (1) | 1 | | | |
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| 1984 | | | | | | | | | |
| 1985 | (3*) | | | | | 3* | 3* | | |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY

CONNECTICUT AND RHODE ISLAND

| YEAR | NEW LONDON | MIDDLESEX | NEW HAVEN | FAIRFIELD | NEWPORT | BRISTOL | PROVIDENCE | KENT | WASHINGTON |
|------|------------|-----------|-----------|-----------|---------|---------|------------|------|------------|
| 1900 | | | | | | | | | |
| 1901 | | | | | | | | | |
| 1902 | | | | | | | | | |
| 1903 | 1 | 1 | | | | | | | |
| 1904 | | | | | | | | | |
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| 1937 | | | | | | | | | |
| 1938 | 3* | 3* | 3* | 3* | 3* | 3* | 3* | 3* | 3* |
| 1939 | | | | | | | | | |
| 1940 | | | | | | | | | |
| 1941 | | | | | | | | | |
| 1942 | | | | | | | | | |
| 1943 | | | | | | | | | |
| 1944 | (3*) | (3*) | (3*) | 3* | 3* | 3* | (3*) | (3*) | 3* |
| 1945 | | | | | | | | | |
| 1946 | | | | | | | | | |
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| 1953 | | | | | | | | | |
| 1954 | (3*) | (3*) | (3*) | 3* | 3* | 3* | 3* | 3* | 3* |
| 1955 | | | | | | | | | |
| 1956 | | | | | | | | | |
| 1957 | | | | | | | | | |
| 1958 | | | | | | | | | |
| 1959 | | | | | | | | | |
| 1960 | | | (2*) | 2* | 2* | 2* | 2* | 2* | 2* |
| 1961 | | | | | | | | | |
| 1962 | | | | | | | | | |
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| 1971 | | | | | | | | | |
| 1972 | 1 | (1) | | | | | | | |
| 1973 | | | | | | | | | |
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| 1984 | | | | | | | | | |
| 1985 | (2*) | 2* | 2* | 2* | (2*) | (2*) | (2*) | (2*) | (2*) |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
| 1990 | | | | | | | | | |

COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY

MASSACHUSETTS

| YEAR | BRISTOL | DUKES | NANTUCKET | BARNSTABLE | PLYMOUTH | NORFOLK | SUFFOLK | ESSEX |
|------|---------|---------|-----------|------------|----------|---------|---------|-------|
| 1900 | | | | | | | | |
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| 1914 | | | | | | | | |
| 1915 | | | | | | | | |
| 1916 | (1) | 1 | 1 | 1 | 1 | | | |
| 1917 | | | | | | | | |
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| 1937 | | | | | | | | |
| 1938 | 3* | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) | (3*) |
| 1939 | | | | | | | | |
| 1940 | | | | | | | | |
| 1941 | | | | | | | | |
| 1942 | | | | | | | | |
| 1943 | | | | | | | | |
| 1944 | 2* | 2* | (2*) | 2* | 2* | 2* | 2* | (2*) |
| 1945 | | | | | | | | |
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| 1953 | | | | | | | | |
| 1954 | (3*) | (3*),3* | (3*),3* | (3*),3* | (3*),3* | | | |
| 1955 | | | | | | | | |
| 1956 | | | | | | | | |
| 1957 | | | | | | | | |
| 1958 | | | | | | | | |
| 1959 | | | | | | | | |
| 1960 | (2*) | (2*) | (2*) | (2*) | (2*) | 1* | 1* | 1* |
| 1961 | | | | | | | | |
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| 1985 | (2*) | (2*) | (2*) | (2*) | (2*) | (2*) | (2*) | (2*) |
| 1986 | | | | | | | | |
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COUNTY HURRICANE STRIKES (1900-1990) BY SAFFIR-SIMPSON CATEGORY

NEW HAMPSHIRE AND MAINE

| YEAR | ROCKINGHAM | YORK | CUMBERLAND | SAGadahOC | LINCOLN | KNOX | WALDO | HANCOCK | WASHINGTON |
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| 1954 | | | | | | | | | 1* |
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| 1957 | | | | | | | | | |
| 1958 | | | | | | | | | |
| 1959 | | | | | | | | | |
| 1960 | 1* | 1* | 1* | 1* | 1* | | | | |
| 1961 | | | | | | | | | |
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| 1984 | | | | | | | | | |
| 1985 | 2* | 1* | 1* | 1* | 1* | 1* | 1* | (1*) | (1*) |
| 1986 | | | | | | | | | |
| 1987 | | | | | | | | | |
| 1988 | | | | | | | | | |
| 1989 | | | | | | | | | |
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