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Source: *Ethnohistory*, Autumn, 1984, Vol. 31, No. 4 (Autumn, 1984), pp. 289-300

Published by: Duke University Press

Stable URL: <https://www.jstor.org/stable/482714>

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CHEROKEE POPULATION LOSSES DURING THE TRAIL OF TEARS: A NEW PERSPECTIVE AND A NEW ESTIMATE

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Abstract

The relocation of the Cherokee Indians from southeastern United States to Indian Territory during the 1830s is examined. A new perspective on what constitutes their population losses during relocation is offered, one covering the whole period and one considering what population size would have been had not the removal occurred. Total Cherokee population losses are then estimated using projections of 19th century Cherokee population trends. Results indicate these losses were very substantial; in fact, the number of deaths may have been twice the generally accepted figure of 4,000.

It is said that as many as 100,000 American Indians were removed from eastern homelands to locations west of the Mississippi River during the first half of the 19th century (Blue 1974, iii; Doran 1975, 496-97). Most of this number were members of five tribes: Cherokee, Chickasaw, Choctaw, Creek, and Seminole, along with remnants of other southeastern Indian groups who had joined with them. Most of the relocations occurred in the decade following passage of the United States Indian Removal Act of 1830 (see Prucha 1975, 52-53), though some occurred earlier and some later. Whenever they may have taken place, few events in the history of any people were as tragic as these journeys were for the Indian tribes involved. In fact, the removal of the Cherokee during the late 1830s was so arduous that they subsequently named it *Nunna daul Tsuny* (Trail Where We Cried); it has become known in English as the "Trail of Tears." The Cherokee suffered from adverse weather, mistreatment by soldiers, inadequate food, disease, bereavement, and the loss of their homes, all of which contributed to large population losses; just how large is the topic of this article.

Cherokee Removal

The land of the Cherokees had once been immense. It had extended from the Ohio River south almost to present-day Atlanta, Georgia, and from Virginia and the Carolinas west across Tennessee, Kentucky and Alabama to the Illinois River. By the close of the Revolutionary War, Cherokee tribal lands had shrunk considerably in the north and east, as populations of whites had settled there; by the mid-1830s, Cherokee territory encompassed only the area where North Carolina, Tennessee, Georgia, and Alabama more or less converge (see Mooney 1975, 10).

During this period, the Cherokees were increasingly subjected to invasions of armed men from Georgia, "forcibly seizing horses and cattle, taking possession of houses from which they had ejected occupants, and assaulting the owners

who dared make resistance" (Mooney 1975, 112); they were all but helpless to retaliate. The situation grew worse in 1828 when the state of Georgia passed an act annexing Cherokee country, declaring Cherokee laws null and void, and allowing no Indian "as a witness or party in any suit where a white man should be defendant" (Mooney 1975, 111).

Subjected also to pressure from the U.S. Government to cede the remainder of their lands and move west of the Mississippi River, the Cherokee resisted as best they could. They took several cases to the U.S. Supreme Court, winning an important case which involved the missionary, Samuel A. Worcester, who resided on Cherokee land with tribal permission. Arrested by Georgia militia for helping the Cherokees, Worcester and the Cherokee tribe contended that Georgia had no right to interfere as the Cherokees were "a nation with a guaranteed and definite territory" (Mooney 1975, 113). The Supreme Court agreed, but Georgia refused to release Worcester. President Andrew Jackson is reported to have said in response to the decision, "John Marshall had made his decision, now let him enforce it" (Mooney 1975, 114).

After three years of further turmoil, the Treaty of New Echota was signed by some individual Cherokees, but not by the principal officers of the Nation. It called for an exchange of eastern lands for lands west of the Mississippi River in Indian territory, and for the payment of \$15,000,000 to the Cherokees. Although the leaders of the Cherokee Nation, including Chief John Ross, protested the treaty, it was eventually consummated.

During these events, some Cherokees had voluntarily moved west into Arkansas and Indian Territories. Most, however, remained in their homelands, still not believing they would be forced to leave. In 1838 the Cherokees were disarmed, and General Winfield Scott was sent to oversee their removal. Mooney summarizes some of the events of the relocation:

The history of this Cherokee removal of 1838, as gleaned by the author from the lips of actors in the tragedy, may well exceed in weight of grief and pathos any other passage in American history. Even the much-sung exile of the Acadians falls far behind it in its sum of death and misery. Under Scott's orders the troops were disposed at various points throughout the Cherokee country, where stockade forts were erected for gathering in and holding the Indians preparatory to removal. From these, squads of troops were sent to search out with rifle and bayonet every small cabin hidden away in the coves or by the sides of mountain streams, to seize and bring in as prisoners all the occupants, however or wherever they might be found. Families at dinner were startled by the sudden gleam of bayonets in the doorway and rose up to be driven with blows and oaths along the weary miles of trail that led to the stockade. Men were seized in their fields or going along the road, women were taken from their wheels and children from their play. In many cases, on turning for one last look as they crossed the ridge, they saw their homes in flames, fired by the lawless rabble that followed on the heels of the soldiers to loot and pillage. So keen were these outlaws on the scent that in some instances they were driving off the cattle and other stock of the Indians almost before the soldiers had fairly started their owners in the other direction. Systematic hunts were made by the same men for Indian graves, to rob them of the silver pendants and other valuables deposited with the dead. (Mooney 1975, 122)

John G. Burnett, a soldier who participated in the removal, describes other incidents:

Men working in the fields were arrested and driven to the stockades. Women were dragged from their homes by soldiers whose language they could not understand.

Children were often separated from their parents and driven into the stockades with the sky for a blanket and the earth for a pillow. And often the old and infirm were prodded with bayonets to hasten them to the stockades.

In one home death had come during the night, a little sad faced child had died and was lying on a bear skin couch and some women were preparing the little body for burial. All were arrested and driven out leaving the child in the cabin. I don't know who buried the body.

In another home was a frail Mother, apparently a widow and three small children, one just a baby. When told that she must go the Mother gathered the children at her feet, prayed a humble prayer in her native tongue, patted the old family dog on the head, told the faithful creature good-bye, with a baby strapped on her back and leading a child with each hand started on her exile. But the task was too great for that frail Mother. A stroke of heart failure relieved her sufferings. She sunk and died with her baby on her back, and her other two children clinging to her hands. (Burnett 1978, 183)

After the initial round-up of the Cherokees into small stockades scattered around their lands, they were brought to three points for removal west: Old Agency on the Hiwassee River (near Calhoun, Tennessee), Ross's Landing (Chattanooga, Tennessee), and Gunter's Landing (Guntersville, Alabama). The original plan was to put them on steamboats and move them down the Tennessee and Ohio Rivers to the Mississippi, then overland to Indian Territory. A few thousand were removed this way. However, "this removal in the hottest part of the year, was attended with so great sickness and mortality that, by resolution of the Cherokee national council, Ross and the other chiefs submitted to General Scott a proposition that the Cherokees be allowed to remove themselves in the fall, after the sickly season had ended" (Mooney 1975, 125-26).

In October, 1838, the Cherokees began their own removal. They traveled primarily overland in thirteen recorded groups averaging about 1,000 people each (King and Evans 1978, 187). The journey carried them north and west across Tennessee and Kentucky, then across southern Illinois, Missouri and into northeastern Indian Territory. An aged Cherokee woman who made the journey when she was three years old remembers:

My father had a wagon pulled by two spans of oxen to haul us in. Eight of my brothers and sisters and two or three widow women and children rode with us. My brother Dick, who was a good deal older than I was, walked along with a long whip which he popped over the back of the oxen and drove them all the way. My father and mother walked all the way also.

The people got so tired of eating salt pork on the journey that my father would walk through the woods as we traveled, hunting for turkey and deer which he brought into camp to feed us. Camp was usually made at some place where water was to be had and when we stopped and prepared to cook our food, other emigrants who had been driven from their homes without opportunity to secure cooking utensils came to our camp to use our pots and kettles. There was much sickness among the emigrants and a great many little children died of whooping cough. (Neugin 1978, 176)

Suffering and turmoil did not end on arrival in Indian Territory, however. Many survived the hardships of imprisonment and travel only to face disease and/or starvation in the new homelands (Doran 1976, 499). Probably in part as a reaction to the severity of the relocation, three of the Cherokee men who had signed the Treaty of New Echota—Major Ridge, his son John Ridge, and Elias Boudinot—were executed: "The men were killed in accordance with the

law of the Nation—three times formulated, and still in existence—which made it treason, punishable with death, to cede away lands except by act of the general council of the Nation” (Mooney 1975, 128).

Current View of Population Losses

Thousands of Cherokees are said to have died during the entire Trail of Tears ordeal; that is, during the round-up and months spent in stockades awaiting removal, the journey itself, and the first year in Indian Territory. The diseases they suffered included “colds, influenza, sore throat, pleurisy, measles, diarrhea, fevers, toothache and, among the young men, gonorrhoea” (Knight 1954-55, 424); also dysentery (Howard and Allen 1976, 352-54), whooping cough, and cholera (Foreman 1932, 238-312). Others died from accidents, cold of winter, hardships of the journey, and gunshot wounds; still others from inadequate food and starvation (Foreman 1932, 238-312; Mooney 1975, 124-30).

As mentioned, many deaths occurred neither before nor during the active removal, but soon after arrival in Indian Territory. Thus, “according to information taken from sources on the Five Civilized Tribes soon after their arrival, it would seem that the great majority managed to reach their new homelands. However, soon afterward they were swept by a series of epidemic diseases, and it was then that a tremendous number died” (Doran 1975, 497). And, “[n]o estimates are available for the Cherokee death rate, but. . . they began dying in great numbers soon after their arrival, for they had no doctors or medicine to combat disease. . . many died of simple starvation. . . , because of blatant corruption among the agents at the supply depots” (Doran 1975, 498).

In summary then, there is no detailed information as to exactly how many Cherokees died during the removal period; only speculations exist. However, there is high consensus on a figure. In writing on Cherokee relation, Mooney comments:

It is difficult to arrive at any accurate statement of the number of Cherokee who died as the result of the Removal. According to the official figures those who removed under the direction of Ross lost over 1,600 on the journey. The proportionate mortality among these previously removed under military supervision was probably greater, as it was their suffering that led to the proposition of the Cherokee national officers to take charge of the emigration. Hundreds died in the stockades and the waiting camps, chiefly by reason of the rations furnished, which were of flour and other provisions to which they were unaccustomed and which they did not know how to prepare properly. Hundreds of others died soon after their arrival in Indian Territory, from sickness and exposure on the journey. Altogether it is asserted, probably with reason, that over 4,000 Cherokee died as the direct result of the removal. (Mooney 1975, 127)

The figure of 4,000 deaths is generally accepted by more recent scholars. For example, Foreman (1932, 312) asserts that “[a]ll told, 4,000 died during the course of capture and detention in temporary stockades and the removal itself”; according to Howard and Allen (1976, 354), “[m]ore than 4,000 eastern Cherokee died during the removal or within a year of their arrival in the west”; and Knight (1954-55, 425) indicates that “[b]y the time the transplantation was completed in 1839, approximately four thousand Cherokees had died.” A similar figure is given when scholars place mortality in the context of Cherokee

population estimates, either the approximately 16,000 removed or the total tribal number of over 20,000 which includes early emigrants west as well as those who escaped removal. Thus, Blue (1974, v) writes, "It is commonly noted that 16,000 Cherokees were removed, 4,000 of whom died on what is called the 'Trail of Tears.'" And Swanton (1946, 113) asserts that Cherokee removal caused "intense suffering on the part of the Indians and the loss of nearly one-fourth of their numbers." The number lost here would be either about 4,000 or 5,000, depending on whether Swanton was referring to the 16,000 removed or the total of 20,000.

The source of Mooney's figure of 4,000 is not known. The present writer has seen two mentions of the figure earlier than Mooney's 1900 report. One is in a letter written in 1890 by a soldier who, as a young man, participated in the removal. He (Burnett 1978, 182) writes that there are "four-thousand silent graves reaching from the foothills of the Smoky Mountains to what is known as Indian Territory in the West." An earlier mention, and perhaps the original, dates from 1839, as cited in Wilkins (1970, 315): "No one knew exactly how many Cherokees had perished in the ordeal. The trail was especially hard on babies, children, and the aged. Four thousand, nearly one fifth of the entire Cherokee population, is the estimate usually cited, one made by Dr. Butler the Missionary. . . ."

Such estimates would place Cherokee mortality about midway in the mortality losses of the other four major southeastern tribes, as well as can now be ascertained. The Choctaws are said to have lost fifteen percent of their population, 6,000 out of 40,000 (Allen 1970, 62); and the Chickasaw removal is said to have been "a comparatively tranquil affair. . ." (Foreman 1932, 226), though they surely suffered severe losses as well. By contrast, the Creeks and Seminoles are said to have suffered about 50 percent mortality (Doran 1975, 499-500). For the Creeks, this came primarily in the period immediately after removal: for example, "of the 10,000 or more who were resettled in 1836-37. . . an incredible 3,500. . . died of 'bulious fevers'" (Doran 1975, 497). The high Seminole mortality seems not to have resulted primarily from post-removal disease but from "the terrible war of attrition that had been required to force them to move" (Doran 1975, 498).

Still the figure of 4,000 deaths during the Cherokee Trail of Tears seems a highly speculative one. It appears only to be a suggested estimate, one without a hard factual basis, but one which subsequent scholars have cited and re-cited. The exact number of Cherokee lives the removal cost was surely never known, and will surely never be known. That information was never ascertained and never recorded, and is lost forever. It is possible, however, to derive empirically an estimate of Cherokee population losses, one going beyond speculation, one based on factual data; this is an estimate derived by techniques of demographic analysis.

A New Perspective on Population Losses

In an important sense the often cited 4,000 mortality figure encompasses only one perspective of Cherokee population loss due to removal. From another perspective one may speak of *total* Cherokee population losses. In this

sense *population loss is the difference between actual population size (after removal) and what population size would have been had removal not occurred.* This calculation is based not only on the increased death rate during the removal, but also on changes in both the frequency of birth and migration, the two other components of numerical population change. Removal surely affected fertility and migration in addition to mortality; effects on both of these should be included, therefore, along with effects on mortality in estimating a total population cost for the Trail of Tears. It is this perspective which guides the following estimate of Cherokee population losses during their removal.

Available Population Data

Unfortunately, reasonable and direct data do not exist for ascertaining a total Cherokee population loss during the Trail of Tears period. Cherokee population size at the time of removal may be fairly accurately stated from the 1835 Cherokee Census, along with estimates of earlier western emigration. Also needed, however, are mortality, fertility and migration rates for the removal period, in order to project the 1835 population forward to a date subsequent to the time of removal; *and* a population enumeration for the same date with which to compare this population projection. None of these are available. It is possible, however, to approximate the two figures utilizing existing data, and thus establishing a reasonable estimate of total Cherokee population loss during the period of the Trail of Tears.

Various records and estimates of Cherokee population size are available for points throughout the 19th century. These range from the Meigs Census of 1809 reporting 12,395 Eastern Cherokees (McLoughlin and Conser 1977) to the 1890 U.S. Census, which enumerated 22,015 Western Cherokee (U.S. Bureau of the Census 1894).

As mentioned above, a Cherokee Census was undertaken in 1835, shortly before the United States government started to remove the Cherokees in 1837. It tallied 16,542 Eastern Cherokees; there were already an estimated 5,000 Cherokees west of the Mississippi, most of whom had emigrated during the preceding two decades (McLoughlin and Conser 1977, 702). Prior to this, there was the Meigs Census in 1809, a census reported by Boudinot in 1826, and the *Cherokee Phoenix* census of 1828; all three will be used for present purposes.

The next dates for which reasonably good population data exist do not occur until after 1850. There is an 1840 census by William Holland Thomas and the 1848 Mullay Roll of North Carolina Cherokees, but neither is complete enough to use. The Drennen Roll, which was taken in 1852, is usable, however, (Doran 1975, 500); it was a fairly complete count of the Western Cherokees. To it may be added an adjusted 1851 figure of Eastern Cherokees from the Siler Census (see Table 1.) In 1866 there was another census of Western Cherokees reported by Royce (1975, 192). It may also be used. After this point United States Census figures are available for dates extending throughout the remainder of the 19th century; these include enumerations of Western Cherokees and estimates of the numbers of Eastern Cherokees.

Table 1
Cherokee Population Size: 1808-09 to 1880

Date	Eastern	Western	Total
1808-09	12,395 ^a	1,000 ^b	13,395
1826	13,963 ^c	3,500-4,000 ^c	17,713
1828	14,972 ^d	3,500-4,000(?) ^e	18,722
1835	16,542 ^f	5,000(?) ^g	21,542
1851-52	1,981(?) ^h	13,821 ⁱ	15,802
1866	2,000(?) ^j	13,566 ^k	15,566
1875	2,500 ^l	17,217 ^l	19,717
1880	2,200 ^l	19,720 ^l	21,920

^aMeigs Census (cited in McLoughlin and Conser 1977, 681, Table 1).

^bBaker (1977).

^cBoudinot figure (cited in McLoughlin and Conser 1977, 681, Table 1).

^dCherokee Phoenix figure (cited in McLoughlin and Conser 1977, 681, Table 1).

^eThis is for the year 1826.

^fCherokee Census of 1835 (Tyler 1974).

^gMcLoughlin and Conser (1977, 702).

^hEastern Cherokee Census of 1851 (Siler 1972). The total number of names is 2,343. Of these, however, 363 were whites and disallowed individuals (and there was one individual skipped in the numbering). See Royce (1975, 192) for additional information.

ⁱDrennen Roll (cited in Doran 1975).

^jEstimated.

^kRoyce (1975, 229).

^lU.S. Census (1915, 83).

Given the availability of these various population data, it is possible to obtain the desired two estimates of Cherokee population size for a common date of interest. This may be accomplished by projecting *forward* the population trend culminating with the 1835 Census, and projecting *backward* the trend beginning with the 1852 Roll. The projections will provide an estimate of the actual Cherokee population size immediately after removal and an estimate of the hypothetical Cherokee population size had removal not occurred. These two population estimates may then be compared and the estimated Cherokee population loss established.

The only detail remaining is the selection of a postremoval date for the population estimates. An appropriate date would appear to be 1840. Actual removal ended in 1839, but apparently its immediate effects continued for at least a year afterward. It will be recalled that the 4,000 deaths attributed to removal are generally said to cover the span of capture, detention, and relocation of the Cherokees *and* the year thereafter (Foreman 1932, 312; Howard and Allen 1976, 354).¹ Thus, the date 1840 will be used to mark the end of the removal period.

To obtain the two estimates, Cherokee population sizes for three 19th century points prior to the 1835 Census and following the 1852 Roll were established from the censuses and rolls named above. In all instances population sizes for both Eastern and Western Cherokees were included, since the tribal population had been divided from the late 18th century. This makes it possible for a *total* size of the Cherokee population to be established for all dates. These data are presented in Table 1.

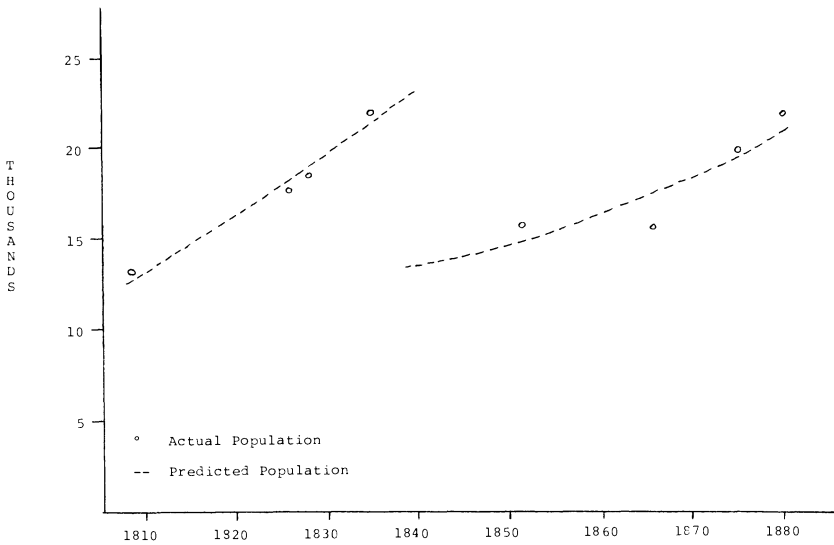


Figure 1. Actual Cherokee Population Sizes and Predicted Population Curves: 1808-09 to 1840; 1880 to 1840.

After establishing these data points, the two sets of figures were plotted and examined to ascertain population trends. As shown in Figure 1, the population trends both closely approximate logarithmic curves. (The main discrepancy is for 1866, immediately after the Civil War. The Cherokees suffered severe population losses from the War; hence, the small population decline from 1851-52 to 1866 [Mooney 1975, 149]). Because the data points do closely follow curves, population projections may be made from them.

Population Loss from Projections

It is now a straightforward task to discover the two desired estimates. They may be obtained by extending the earlier logarithmic curve forward to 1840 and the later one backward to 1840. This may be done using the standard formula: $\log y = a + bx$ (where y is population size, a is y -intercept, b is slope, and x is date).

Solving the equation for the year 1840 using the 1808-09 to 1835 population trend yields a population estimate of 23,170. Solving the equation for the same year using the 1851-52 to 1880 population trend yields a population estimate of 13,032 (see Table 2). In other words, if the 1808-09 to 1835 Cherokee population trend had continued to 1840, there would have been 23,170 Cherokee in 1840; conversely, if the Cherokee population trend from 1840 to 1851-52 had been the same as from 1851-52 to 1880, there would have been only 13,032 Cherokee in 1840.

Subtracting the smaller (13,032) from the higher (23,170) estimate yields a difference of 10,138. This may be considered total Cherokee population "loss" over the five years from 1835-40, i.e., the Trail of Tears period.

Table 2
Actual and Predicted Cherokee Population Size:
1808-09 to 1840; 1880 to 1840

Date	Actual	Predicted*
1808-09	13,395	13,292
1826	17,713	18,100
1828	18,722	18,750
1835	21,542	21,214
1840	—	23,170
.....
1840	—	13,032
1851-52	15,802	14,891
1866	15,566	17,617
1875	19,717	19,555
1880	21,920	20,722

*From the formula: $\log y = a + bx$; where y is population, a is y -intercept, b is slope, and x is date.

Implications of Vital Events Estimates

Corroboration of this difference might be derived from vital events records, as might an indication of the relative contributions of fertility and mortality to it. Unfortunately, data are not available to establish these with certainty; to do so, rates of births and deaths both before and during the removal years would need to be known; but they are not. However, fertility and mortality rates during the period may be estimated from information in written records of the Trail of Tears.

Most Cherokees were removed in thirteen groups of approximately 1,000 each during 1838-39, under the direction of their chief, John Ross. Though there is some discrepancy between different counts, somewhere around 13,000 Cherokees were relocated during this time; only a few thousand were relocated during preceding years (Foreman 1932, 300). For ten of these thirteen groups, numbers of births and deaths were recorded (King and Evans 1978, 186-87). From these data, rates may be ascertained and then projected for the total year. Both crude birth and death rates may be derived from the formula

$$CR = \frac{B \text{ or } D}{P} \times K$$

(where B or D is births and deaths, P is population at midpoint of journey, and K is a constant of 1,000). These rates may then be converted to yearly estimates based on 365 days from the average relocation journey of 153 days.

Assuming rates were constant during the entire period of removal, it is possible to estimate total number of births and deaths. Of course, an argument that the rates were constant or even nearly so may be tenuous. Extensive disruption in the Cherokee Nation probably did not occur until around 1837; therefore, the birth rate was probably higher and the death rate probably lower prior to this date. Further, the mortality rate was apparently higher for the year after the removal because of severe epidemics and starvation in Indian Territory; it has been asserted that most population loss occurred then (Foreman 1932, 263; Doran 1975, 499). It is also likely that the birth rate was lower because of the epidemics and starvation. On the whole rates may very well

have averaged out; therefore, rates during the removal may reasonably approximate the real averages of the total five year period.

There were sixty-nine births among the 8,884 emigrants in the ten parties reporting. These occurred during an average journey duration of 153 days from departure points in the Southeast to arrival points in Indian Territory. The above formula converts this to a yearly crude birth rate of 19 per 1,000. The number of deaths reported for these same ten groups during the same time was 424.² This corresponds to a yearly crude death rate of 117 per 1,000. Subtracting births per 1,000 from deaths per 1,000 indicates that Cherokee population was declining at a rate of 98 per 1,000 per year.

If we extend these birth and death rates to the five year period 1835 to 1840 on the basis of the 1835 population of 21,542, the Cherokee population would have declined to 12,862 by 1840. This is extremely close to the 13,032 population estimate obtained above through projected curves. Extending the rates also indicates there were 1,682 births and 10,362 deaths during the five year period.

Numbers of "deserters" (or "emigrants") are available from the emigration rolls, along with births and deaths, but only for three groups. Because of these scanty data and because many such "deserters" may have eventually returned and been counted among Eastern and Western Cherokees, migration rates were not calculated. The Cherokees surely did, however, lose emigrants who settled along the Trail of Tears in Illinois, Indiana, Missouri, and Arkansas; and also surely gained immigrants through the incorporation of 985 Delawares in 1867 (Royce 1975, 235) and 770 Shawnees in 1869 (Royce 1975, 236). These numbers may very well have equalled out.

Conclusion

The analysis presented here indicates that the demographic devastation of Cherokee removal was far more severe than has yet been realized. More than 10,000 additional Cherokees would have been alive during the period 1835 to 1840 had Cherokee removal not occurred. Not all of this population loss represents deaths, to be sure; a number of non-births were involved, as were some number of lost emigrants. Nevertheless, the five year mortality estimate of 10,362 suggests that Cherokee deaths directly due to removal far exceeded the 4,000 generally acknowledged by contemporary scholars. A total mortality figure of 8,000, twice the supposed 4,000, may be not at all unreasonable.

Acknowledgements

This paper was prepared under a Research Scientist Career Development Award from the National Institute of Mental Health (No. 5-K01-00256-05). The assistance of Guillermina Jasso and Joan Marsh-Thornton is gratefully acknowledged. An earlier version of this paper was presented at the 1983 annual meeting of the American Society for Ethnohistory in Albuquerque, New Mexico. Comments by William Swagerty and others, made during that presentation, are very much appreciated.

Notes

1. Of course, subsequent effects on population could be carried forward beyond this time, even to today and into the future. Since so many other events have occurred which have affected Cherokee population, projecting the population very far forward becomes meaningless.
2. This figure of 424 deaths departs markedly from the assertion by James Mooney (1975, 127) that 1,600 were "lost" during the actual journey. Mooney's figure is based on records of Cherokee *departing* and Cherokee *arriving*, not on deaths during the journey (see King and Evans 1978, 186-87).

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