



Sure enough, Georgia-Tennessee border in the wrong place

Information is easy to come by these days. If we want to talk to someone, we call them. If we want to know about something, we look it up on Wikipedia. And if we want to know our latitude and longitude, we buy a satellite navigation device.

It hasn't always been this way. As recently as 20 years ago, I was a naval flight officer on U.S. Navy P-3 Orion airplanes. Although the P-3 had numerous navigation systems, there were times when the crew still relied upon my ability to do celestial navigation — a process under which I calculated the angle between the horizon and the sun, moon or stars through use of an instrument known as a sextant to approximate our location.

Times have changed, and the Navy doesn't even train its navigators to navigate by the stars anymore. But my memories of celestial navigation school came back to me recently when I spoke to Bart Crattie, a land surveyor in Georgia and Tennessee. Crattie, who serves on the board of directors of the American Surveyors Association's historic society, was the instigator of the story that came out a couple of years ago related to the mistaken location of the Georgia-Tennessee state line. From Crattie I learned that, sure enough, the state line is in the wrong place, and the people of Georgia do have an historic claim (though not a valid legal claim) on the waters of the Tennessee River.

Here is the gist of the story: When Congress voted to make Tennessee a state in 1796, it set 35 degrees north as the boundary between Georgia and Tennessee. At the time, this line between Tennessee and Georgia was in Cherokee Indian Territory (some of it occupied by warlike Chickamaugans). So there was no immediate need to determine its exact location.



Though Congress designated Tennessee's south border along the 35th degree of north latitude, the surveying team led by James Camak, using unreliable equipment, set the boundary more than a mile to the south.

It wasn't until 1818 (after the Chickamaugans were defeated) that Georgia and Tennessee decided it was time to map out their common boundary. The states appointed a three-person team to find the border as far west as the new Alabama border.

The border was laid out in the following manner: First, mathematicians determined the location of the 35th parallel at a landmark location, using a sextant that was a lot cruder than the one I used in the Navy. From that point, surveyors went east, using magnetic compasses, and marked the boundary at 33-foot increments.

The mathematician appointed by the state of Georgia was James Camak, a professor at the University of Georgia. According to Crattie, who has examined Camak's journals in detail, Camak and the other members of the surveying party started at the site of the Chickamaugan village of Nickajack, which had also been determined to be the boundary between Georgia and the soon-to-be-formed state of Alabama.

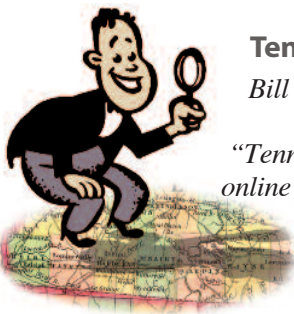
Camak and Tennessee mathematician James Gaines conducted extensive celestial shots at Nickajack, agreeing on what they thought was the location of the 35th parallel. From there, moving east, only two more astronomical observations were made, one at John Ross' house south of Chattanooga and the other at the community of "McNair's," in the vicinity of modern-day Highway 411.

It sounds simple. But if you think this is easy, then apparently you have never tried to do it yourself.

The science of navigating by use of a sextant is hard, and it isn't really an exact science. If the sextant isn't perfect, your calculation won't be perfect. If you make a single mistake in reading your instrument, you will be way off. If your nautical almanac has a single mistake in it, then your conclusion will be wrong.

In fact, in the Navy, we knew we weren't getting our exact location through this manner; we thought of it as a way to get our approximate location.

As for the surveying work in between these "cell" shots, this isn't simple either. For one thing, magnetic compasses are not perfect, especially when there is iron ore in the ground that interferes with the earth's magnetic field. The other is that the terrain near the Georgia-Tennessee border is not flat, to say the



Tennessee History for Kids

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least. It is treacherous and steep, which is exactly why the war-like Chickamaugans were hiding out there in the first place.

Crattie has discovered another reason their calculations might have been slightly off: bad equipment. A few weeks before setting out for the surveying trip, Camak wrote the governor of Georgia and asked him (futilely, it turned out) for better surveying equipment. Years later, he also expressed concern about the accuracy of his astronomical tables, saying “they were not such as I could have wished for them to be.”

We now know that the surveying party made a mistake. Rather than place the border at 35 degrees north, as they were supposed to do, they put the border at about 34 degrees and 59 minutes north (about a mile off). Had they placed the border where it should have gone, the current of the Tennessee River would have dipped into Georgia. But, instead, the state of Georgia missed the Tennessee River by only a few hundred feet.

In hindsight, there are some important historical places in Tennessee that would have been in Georgia had it not been for this error. Red Clay, where the Cherokee Indians gathered before being forced west in the Trail of Tears, is south of the 35th parallel. Parts of Chattanooga were laid out on what should have been Georgia land. The well-known industrial community (and now ecological problem site) of Copperhill should have been in Georgia.

No one knows when it first became apparent that the border was in the wrong place. But starting in 1887, the Georgia Legislature began raising the border dispute in the form of resolutions and has done so about every 20 years since that time.

Most recently the matter came up in 2007, when Crattie



wrote a letter to the Atlanta Journal-Constitution about this surveying mistake and pointed out that, had this not taken place, the populous north Georgia area would have access to the Tennessee River and its abundant supply of water (Unlike Tennessee, Georgia is not blessed with Tennessee’s abundant river systems.) Crattie didn’t mean to start a

big controversy, but he sure did. “Next thing I know, I was getting calls from the New York Times, National Public Radio, you name it,” he says. In 2008, there were attempts by the Georgia Legislature to ask Tennessee to talk about moving the state line to its rightful location, but Gov. Phil Bredesen shot those down. And, in case you are wondering, there is no legal precedent for moving a state line that was mistakenly put in the wrong place. Attorneys and law professors who have been asked about this situation cite the “acquiescence” — a legal term that effectively



The borders of Tennessee, Georgia and Alabama meet at the “Camak Stone,” above and at left. Bart Crattie, below, a surveyor in Tennessee and Georgia, says Tennessee’s south border was incorrectly placed, depriving north Georgia of the Tennessee River’s waters.

says that if a person or government puts up with something for long enough, they forfeit the right to take legal action about it later. Also, on a practical level, moving the Tennessee-Georgia border would open a national can of worms: There are borders all over the country that are slightly off, and moving them would create thousands of disputes.

Nevertheless, the government of the state of Georgia does retain the legal right to continue to complain about this. I’m sure they’ll continue to do so.

Crattie feels somewhat ambivalent about the situation, being the one who brought this historic injustice to the forefront. But he does want to make one thing clear: The surveyors and mathematicians who accidentally laid out the border in the wrong place were competent men. “If you don’t believe me, take a look at Tennessee’s boundary with Kentucky,” he says. “That one is off by a lot more than a mile!”

