

GREAT SMOKY MOUNTAINS

# Colloquy

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Mount Guyot from Rocky Spur (PHOTOGRAPH BY JIM THOMPSON, FROM THE THOMPSON BROTHERS DIGITAL PHOTOGRAPH COLLECTION)

## Mapping the Smokies

### THE CURIOUS MISTAKE OF ARNOLD GUYOT

During the early part of his professional career in the United States, Arnold Guyot, the distinguished Swiss geographer from Princeton University, engaged in the monumental task of charting the topography of the entire Appalachian chain. To accomplish this task, Guyot climbed each peak and calculated the altitude using a barometer. A man of precise habits, he measured the air pressure at both dawn and dusk to be sure of an accurate reading. He repeated this task throughout the most rugged mountains in the Eastern United States.

Ernest Sandoz, Guyot's nephew, used his uncle's early findings to create a map which he published in the 1860 issue of *Petermann's Mittheilungen*, a prestigious German geography journal. Meanwhile, during the summers of 1859 and 1860, Guyot completed the last of his work in the Appalachians, measuring the high peaks along the main Smoky Mountain divide separating North Carolina and Tennessee. Using the field notes compiled by his uncle, Sandoz sketched out an overlay of his earlier map. This sketch is the first map that shows any significant detail of elevation and nomenclature of the high peaks in the interior of the Great Smoky Mountains. It also shows that the precise geographer Guyot made a significant error.

Although the main Smoky divide between North Carolina and Tennessee had been surveyed by William Davenport in 1821 and verified to coincide with the state boundary, there are anecdotal reports that inhabitants on the eastern end of the Great Smokies understood the state line to follow Mount Sterling Ridge and Balsam Mountain, a course slightly south of the true boundary.

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Mount Guyot from the Appalachian Trail, 1945 (PHOTOGRAPH FROM THE ALBERT "DUTCH" ROTH COLLECTION)

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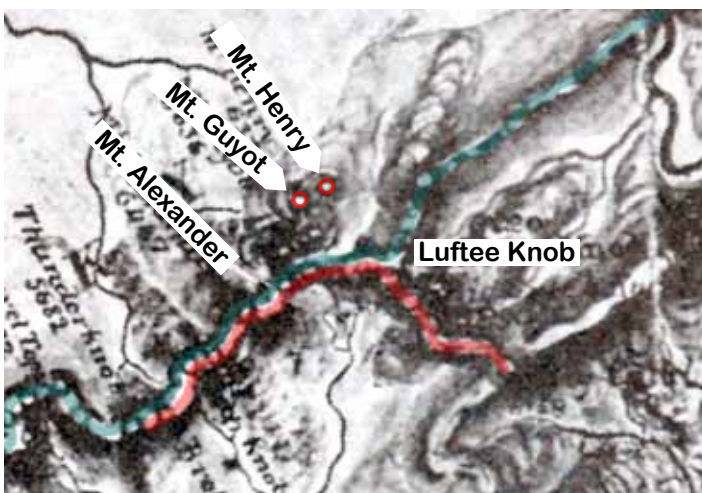
Arnold Henry Guyot (FROM  
DICTIONARY OF AMERICAN  
PORTRAITS)

When venturing to measure the peaks of the Smokies, it is likely Guyot traveled to Mount Sterling Post Office, a tiny hamlet on Big Creek between Mount Sterling Ridge and the main Smoky divide, where he inquired of local inhabitants on the directions to the state boundary. Either from an honest misunderstanding of the true course of the boundary or from a desire to make sport of a odd little man who “talked funny,” had a bad haircut, and was leading a pack animal loaded

with peculiar scientific apparatus, the locals directed Guyot erroneously to Balsam Mountain.

Guyot left no record of his actual encounters with the Smoky mountaineers and little of his explorations in the Smokies. His most detailed published account, “On the Appalachian Mountain System,” outlines the geography of the Appalachian chain and lists the elevations of several mountain groups. His major observations on the topography of the Smoky Mountains were, curiously enough, never published. However, on February 26, 1863, Guyot transmitted to the Director of the Coast Survey in Washington DC a manuscript “Notes on the Geography of the Mountain District of Western North Carolina” in which he had recorded his measurements of the peaks of the Great Smoky Mountains. The manuscript remained buried in the official archives until it was discovered in the Library of the Coast and Geodetic Survey in 1929 and subsequently published in the *North Carolina Historical Review*.

Sandoz’s sketch showing Mounts Guyot and Henry wholly in Tennessee. Red line shows Guyot’s understanding of the state line. Green line marks the true state line.



It is clear from his “Notes” that Guyot understood the main Smoky divide to follow Balsam Mountain rather than the state line as Davenport had surveyed it. In a general description of the Appalachian System, Guyot explains that several of the highest points are not found on the main spine of the chain itself but stand apart as outliers. To illustrate his point Guyot refers to two examples, both in the Smoky Mountains: “the triple mountain of Bull Head 6,613 feet” and “the group first ascended and named by Buckley [Samuel Buckley, an early botanist] Mounts Guyot, Alexander, and Henry.” Guyot then adds “both of which are very near the water-shed, but outside in Tennessee.” On his first point Guyot is correct. The “triple mountain of Bull Head,” now collectively known as Mount Le Conte, stands as an outlier extending into Tennessee four miles from the main Smoky divide that forms the boundary between the two states.

Guyot’s observation on the second group, “Mounts Guyot, Alexander, and Henry,” is in error. These peaks, known today as Guyot, Chapman, and Old Black, are all aligned along the state-line divide in the vicinity of Tricorner Knob where Balsam Mountain joins the main Smoky divide. If Guyot had followed the true state line, he would have included Guyot, Chapman and Old Black as part of the state divide peaks. Instead he included Luftee Knob and Raven Knob, both peaks located off the state divide on Balsam Mountain but omitted White Top (Mount Cammerer), the distinctive peak on the boundary east of Tricorner that is visible for many miles from both Tennessee and North Carolina.

When Arnold Guyot’s “Notes” resurfaced in 1929, it was discovered to have been accompanied by the sketch completed by Sandoz. From his work on the earlier map published in *Petermann’s*, Sandoz was cognizant of the fact that the state boundary did not follow Balsam Mountain, nevertheless it reflects enormously of the “misdirection” of the local mountaineers. Although the map includes the names and elevations of all major and minor peaks along the boundary from Tricorner Knob west to the end of the Smokies, it depicts nothing to the east, conspicuously omitting White Top. It includes a location for Luftee Knob, a point that would unlikely to have been measured had Guyot started correctly on the state-line. For the same reason, Mounts Guyot and Henry are shown to be wholly in Tennessee rather than straddling the state-line divide.

Since Guyot’s observations were the only current information on the interior of the Great Smoky Mountains, the Sandoz sketch was instrumental in the design of maps of the region in the period beginning

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*Mapping the Smokies*, cont.

with the Civil War. Although he missed the state line in the Eastern Smokies, perhaps by accident or perhaps through a "misdirection" at the Mount Sterling Post Office, Guyot's measurements of the peaks in the Great Smoky Mountains remained the standard for years to come.

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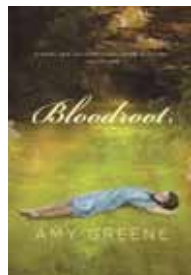
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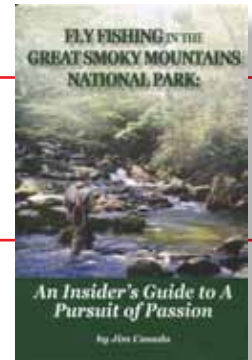


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## New on the Smokies Bookshelf

Jim Casada. *Fly Fishing in the Great Smoky Mountains National Park: An Insider's Guide to a Pursuit of Passion*. High Country Press, 2009. 440 p., includes fold-out map. Order from: [www.jimcasadaoutdoors.com](http://www.jimcasadaoutdoors.com)



Of the dozens of books written every year about the Great Smoky Mountains very few resonate with an authentic appreciation for the peculiar wilderness ethos that defines the Smokies. Jim Casada's *Fly Fishing in the Great Smoky Mountains National Park* is one of the few. Casada's book is a guide to fly fishing as explained by one reared on the streams of the Great Smoky Mountains and who sees them through the eyes of the lore and legend, the people and history, and the beauty and mystery of which these streams are an integral part. To read Casada on fly fishing is to become familiar with the story of the Great Smoky Mountains.

Casada treats his readers to a history of fly fishing in the Smokies followed by a series of clear discourses on the safety and equipment, and the tactics and techniques of fly fishing. What comes next is the heart of the book. With the patience and unhurriedness of a skilled fisherman, Casada guides the reader from Smoky Mountain stream to Smoky Mountain stream, carefully surveying the setting, casting the stories, while reeling in the joys of catching trout and being in the mountains he knows so well.

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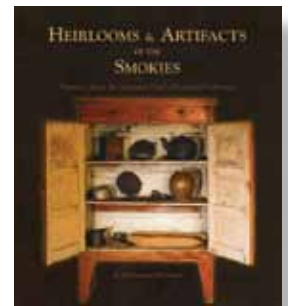
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## You Can Be a Part of the Smokies Project

**W**e are always on the lookout for new material that we can add to the Great Smoky Mountains Regional Collection. If you have written a book or an article that you would like us to know about, please contact us at the address below. We are especially interested in acquiring manuscripts, including both written and photographic works, for the Smokies collection. Unique and rare items are added to our Special Collections where they are cataloged and preserved for future research and enjoyment. And, as with any non-profit venture, we are especially appreciative of monetary donations of any amount that allow us to process and digitize collections.

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*Tulip Poplar* (PHOTOGRAPH FROM THE WILLIAM DERRIS SLIDE COLLECTION, UNIVERSITY OF TENNESSEE SPECIAL COLLECTIONS)



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