

Dr. Thomas, part-Cherokee lawyer turned natural history curator, weekly columnist for the Columbus Dispatch across more than 50 years, and a relative of the great western novelist, Zane Grey, also became my friend, mentor, and fellow biologist. We went on lengthy overnight field trips together, and one summer the three curators of insects and Dr. Theodore H. Hubbell, Director of the University of Michigan Museum of Zoology, invited Dr. Thomas to Michigan to be a visiting summer curator. There he and I completed two articles about unusual and new species of meadow grasshoppers and ground crickets, one of the latter living in the extensive Specht Marsh in eastern Ohio. Because of its beautiful song, we named that ground cricket, *Nemobius melodius*.

Drs. Wolfe and Thomas were among the most inspiring of my friends and mentors while I was a graduate student, and later when I was a postdoctoral associate working on a grant from the Rockefeller Foundation. Among the many profound messages Dr. John Wolfe delivered, he reminded us students that the prairie grass, *Andropogon gerardi* -- more often called Big Bluestem -- had more of its bulk invested in subterranean roots than in its above-ground clumps, explaining in part the astonishingly deep black soil that long after the retreat of the glaciers made the midwestern prairies of the United States its "bread basket." This wonderful prairie grass was also called Elephant Grass because it was said to be so tall that a man on horseback could not see over it. Professor Wolfe proved its height and the extraordinary bulk of its roots to his students by keeping in the biology auditorium a celluloid tower too tall to place upright in any other appropriate room, with the parts of Big Bluestem, roots and all, standing right in front of us whenever we assembled for a lecture in that very special place.

Some time after I acquired an interest in how humans have evolved, I began to think of that incredibly tall and gracefully preserved clump of Big Bluestem, with its immensity of subterranean parts, as a parallel to the human organism. I thought of the huge underground portions of the plant, living in the deep darkness of the midnight black prairie soils -- created by those massive deep roots -- a metaphor, perhaps, for the incredibly complex and still largely unknown and poorly understood basis for the parts and processes of our own beings, most of that basis still living somewhere in a darkness beyond the limits of human consciousness. It is my belief that efforts to achieve world-wide cooperativeness among the multi-billion members of our own species -- especially to diminish or erase the continuing specter of wars and other conflicts that murder millions and cripple many times millions -- are unlikely to be achieved without intense investigation and profound understanding of our evolutionary background. We tend to consider our history without realizing and recognizing the limits of the consciousness that is simultaneously a blessing and, by its narrowness, the source of multiple distorted views as a consequence of how the differential reproduction of the evolutionary process has worked. The parts of our behavior that are muted with respect to consciousness seem strangely to shield and deceive us about the massive presence of our own "underground" roots, and to blind us to features that seek to bind us distastefully to the maximizing of genetic reproduction.

The following verse, about Big Bluestem, was partly written more than 50 years ago.

In an untended graveyard in central Illinois
I saw three proud stems waving in the breeze of Indian Summer,
Their stately, blue-streaked sides rising dauntless
To graceful forks that towered disdainfully
Above vulgar, crowding neighbors
Graceless bastard weeds
And Johnny-Come-Lately to the Illinois prairie.

Big Bluestem! The ghosts of multi-billion ancestors
Blur across the boundless prairie countenance,
A vast rippling carpet, shimmering and unmarred,
Patterned by wind waves, and the darkening sweep
Of clouds across the sun, woven with the
Silent strength of penetrating roots.

Big Bluestem! These three fragile survivors of the monarch species
That ruled this landscape with a dominance
Annihilatory to every intruder,
From the oak's persistent propagules
To the most insidious creeping weed.
And should they know their noble pedigree
These towering kings could wave no more proudly
Than I see them waving now.

When the piling vicious ice moved back,
And floods receded,
When searing southwest winds sucked dry
The roots of tender plants,
Big Bluestem took their place,
Basked in the yellow sun and scattering rain,
Covered this barren, gravelly prairie peninsula
With the soft dark crown of fertility it wears today.

Then came betrayal, the inevitable monster,
The creeping change of climate,
The deadly scythe and slicing plow,
And the seeds of *Andropogon gerardi* fell
And died in a hostile world.

These three remain, struggling,
Clinging on a fragile, tiny island,
A double cemetery now – pioneer and prairie grass
Fading here together.
Three trembling stems brush each other gently

In the breeze that was silenced with
The passing of their greatness.

And even these are doomed,
No plea can save them now,
The vision they bring to an awestruck boy
Who completes, by fingering their graceful culms,
The picture painted by his grandfather's eyes and words,
Is too intangible for short-sighted men.

These three will die unnoticed
When grandfather's grave is dug,
And posterity must get its thrill
From the tasteless depths of a history book.

There is a poignant irony about John Wolfe's desire to convey to students the significance of the massive hidden root system of *Andropogon gerardi*. Some time after Professor Wolfe left the Ohio State University, those responsible for his precious clump of Big Bluestem may have had a problem. Although a clump of Big Bluestem can be seen in OSU's newly refurbished museums building, all that is saved in the classroom's exhibit case is the snipped-off, above-ground portion of John Wolfe's carefully preserved bottom-to-top illustration of that wonderful, royal, once complete prairie grass. In the current exhibit case, however, Big Bluestem seems to be mounted next to two shorter prairie grass species, also with absent root systems.



John Wolfe, 1944