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Jefferson Quick, Timely Reads

Hoppy, Gene, Roy, and Mirages: Apparition or Science

By David Frew
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Dr. David Frew, a prolific writer, author, and speaker, grew up on Erie's lower west side as a proud "Bay Rat," joining neighborhood kids playing and marauding along the west bayfront. He has written for years about his beloved Presque Isle and his adventures on the Great Lakes. In a new series of articles for the Jefferson, the retired professor takes note of life in and around the water.



Our heroes, Gene, Hoppy, and Roy

As kids, we ravenously watched cowboy television and movies during the 1950s. Our heroes were Hopalong Cassidy and his horse, Topper; Gene Autry and his horse, Champion; and Roy Rogers and his horse, Trigger (the horses may have been more exciting than the actual cowboys).

Some of our most intellectual discussions involved ongoing analyses of which was the coolest cowboy, not to mention who would win in a fair fight. The plots, which seem simplistic in retrospect, almost always involved good versus evil and the “cowboy way.” One of the popular and recurring themes involved a cowboy hero encountering an “easterner” who was lost and wandering in the desert. Often he had been thrown off a horse and was staggering about the barren sand, wearing a wool business suit. The hero would find him and offer a drink from his canteen.

Every cowboy had a canteen and many of us kids had them, too. Nothing like carrying a canteen in a cloth cover to enhance one’s image while wandering the bayfront during the 1950s. Or so we thought.

The “easterner” would greedily gulp down too much canteen water while the cowboy would say something like, “Go easy on that water, Partner, we may need it later.” Cowboys knew how to conserve.

After hoisting the hapless and delirious city slicker onto the back of his horse, Hoppy, Roy, or Gene would slowly begin to make his way toward safety, riding double: the end of the frightening and harsh desert. The easterner would inevitably fall off the horse a few times, act badly, and demand more water. There was no reasoning with him in his parched state. Eventually, the “city slicker” would spot a water hole and begin running toward it.

“No,” the cowboy would plead. “It’s a mirage. Don’t waste your energy.”

As Bay Rats, we understood mirages. They were phony images of water with lovely palm trees that appeared to city slickers in the middle of deserts. They were not real. Or were they?

Then one day we all saw a mirage. It was late summer when we were on the bayfront bluffs near Liberty Street, gazing north. It wasn’t an ephemeral vision of water with a palm tree. Rather, it was a strip of sandy beach with trees and a lighthouse. We stared in disbelief, wondering what we were seeing. It was the opposite of a cowboy desert mirage. Instead of water on sand, it was sand superimposed on top of water. It was as if we were gazing across Lake Erie and seeing Presque Isle and the lighthouse.

“How could that have been?” we wondered. We had been to the peninsula and imagined what it would look like if we were seeing it from offshore. But how could it be

staring back at us from the water? We had no idea of what was on the other side of Lake Erie or what Long Point and its lighthouse looked like. We did not realize that a mirage could be a real image, bouncing across water or desert sand. To us a mirage was a phony thing like the water hole in a desert. Parents later convinced us that we had been seeing things, and we gradually forgot about what we thought we saw that day.



Long Point is a sand-spit peninsula almost exactly like Presque Isle and directly across the lake from Erie. Its tip with the lighthouse shown above is approximately 25 miles from Erie's channel.

Then one fall day during the 1990's my family was on our sailboat on a late fall afternoon. Five of us. We sailed through the channel in a stiff breeze and headed due north. After taking turns driving for a few hours I was watching the boat-speed, which was ranging from seven to eight knots. It was an exceptional sailing day, but eventually we decided that we should come-about and head home. Just before we tacked, I mentioned to my son who was at the helm that at this speed we might be able to see Long Point and the lighthouse soon.

His answer shocked me. "It's right there," he said, pointing forward. "I have been looking at it for 30 minutes."

I followed his gesture and spotted the Long Point Light, looking like it might have been just a few miles away. Puzzled, I noted that at our speed we still had to have been 15 or more miles from the lighthouse and that we should not be able to see it. On previous lake crossings we had sailed for several hours before being able to spot Long Point or the lighthouse. And when we did spot it, the lighthouse was a tiny image off in the distance. The lighthouse that we were looking at that day seemed huge and almost right in front of us. We tacked back toward Erie and continued to see the beaches of Long Point, cottonwood trees, and the lighthouse all the way back to the channel, 25 miles away from what we were seeing.

That fall experience reminded me of the day when my friends and I had seen the beaches, trees, and lighthouse during the 1950s. Perhaps we were not really imagining things back then! The next day I visited the Physics Department at Gannon

and asked a colleague. “How could we have seen Long Point, more than 25 miles away?” I wondered.

His answer shocked me. “It must have been a mirage.”

When I described my 1950s cowboy-hero understanding of mirages and how I thought that they were phony images, he laughed and explained that there were two different types. Digging out an optics textbook, he found examples of “inferior” versus “superior” mirages.

The first type, inferior, was the common experience of seeing a seemingly blue body of water in a desert. That was usually (but not always) an unreal mirage. Beckoning desert water holes were probably not real.

The second type, a superior mirage, was a projection of a real object, like the vision of Long Point that we had seen. It appeared above the horizon on a day when there must have been a temperature inversion (hot air stacked on top of cold). Superior mirages were very real. In fact they have often been photographed.



The Nanticoke power plant with its towering 650-foot smokestacks appeared as an amazing mirage to Mary Ann and me one day. At the time it was the largest electric generating plant in North America. The buildings north of (behind) the stacks were 350 feet high.

Years later I had an even more amazing mirage experience. Mary Ann (my wife) and I were at Sunset Point on Presque Isle late one afternoon when the Nanticoke coal-fired power plant appeared on the horizon and to the right (east). We had both been to the Nanticoke plant several times with students and were familiar with the buildings and surroundings. We stared in stunned silence and watched as details of the plant and its operations presented themselves.

We could clearly see the main buildings, twin 650-foot smokestacks, and yard activities, as giant earth-moving equipment moved through the coal yard. It was clear as we watched that we were seeing an amazingly detailed mirage super-imposed on

top of Lake Erie. We watched for several minutes until the image began to become wavy. Then it slowly broke up and disappeared.

The Nanticoke power plant image was a special case of a superior mirage called a “Feta Morgana,” a rare sight that almost always appears over water. Plotting the exact location of the Nanticoke plant on a navigational chart, I found that it was almost 40 miles from where we were viewing the mirage.



The Province of Ontario later decided to abandon and demolish the coal-fired power plant to eliminate its carbon effluent. This amazing image shows the stacks as they came down.

Hoppy, Gene, and Roy inevitably made it to safety with the city slicker tied to the back of the horse. The easterner’s life was saved, even after he had been tempted by a frightening desert mirage that had lured so many to their death. Thank God for the cowboy! In the epilogue the easterner in the wool suit was forever grateful after “Doc” nursed him back to health.

Even though we had watched “Truth, Justice, and the American Way” in action many times, and believed in the lessons of the West, it has now become clear that our cowboy heroes did not know enough about the physics of mirages. In a future article we will explore the frightening dangers of quicksand and how cowboys managed to save themselves and others.

Photos:

Hoppy: <https://www.hulu.com/series/hopalong-cassidy-b7c170b6-0a75-42ec-aaae-d212d3777103>

Gene: https://commons.wikimedia.org/wiki/File:Gene_Autry_1950.jpg

Roy: <https://fiftieswesterns.wordpress.com/2016/11/03/happy-birthday-roy-rogers-3/>

Long Point: <https://www.lpbyc.com/cruising>

Nanticoke Power Plant: <https://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=17701&pid=0>

Demolished Power Plant: <https://www.ctvnews.ca/canada/former-ontario-coal-power-station-s-twin-chimneys-demolished-1.3822082>

ABOUT THE AUTHOR

Historian and author David Frew, Ph.D., is an emeritus professor at Gannon University, where he held a variety of administrative positions during a 33-year career. He is also emeritus director of the Erie County Historical Society/Hagen History Center and is president of his own management consulting business. Frew has written or co-written 35 books and more than 100 articles, cases, and papers.

