

## Epilogue

Retired to Northern California, Milt spends his remaining days fishing for steelhead. In an interview given at the time he gives his account of the moment he produced the enormous redshift back in 1928 and the work with Hubble on the Big Bang Theory.

In a 1965 interview a reporter caught up with Milt at his home in Mendocino, on the California coast at the mouth of the Big River. Ann had married and moved to Sebastopol, a little community north of San Francisco, to raise a family, and Milt and Helen wanted to be with their great grandchildren. Milt's old friend Hugo Benioff had moved there not long before and assured Milt the fish were biting and there was plenty of good weather. Fishing the rivers and bays around Mendocino County sounded perfect to the aging astronomer.

The Humasons were fond of hosting parties and had frequent visitors to the house on Mendocino Drive. Among those who signed their guest book were Milt's brother, Lewis Humason, and his new wife, Gretchen, Adeline Adams, the widow of Walter Adams, and Fritz Zwicky and his wife.

Life had slowed down considerably for Milt since he left the observatory for good. He still heard from Sandage and the others in Pasadena from time to time, and was always happy to hear from them and grateful to hear the latest on the events unfolding in astronomy. New technological advances were making life easier for the astronomers on both mountains. The mercury floats were being replaced by forced oil bearings that were much more dependable and created much less hazard than their highly toxic predecessor. Sandage had discovered quasars, quasi-stellar radio sources, at Palomar and was adjusting the Hubble constant to ever lower levels, expanding the known universe by billions of years.

His life in research had been replaced, however, and now Milt basked in the leisurely glow of a retirement well earned, fly-fishing the cool California waters while revisiting tales of the old days with his friend Hugo Benioff. The surrounding hillside, lush with pine forests and fields of wildflowers, made for wonderful picnic grounds for him and Helen to visit or take Ann and her family on their visits to the area. The hills east of the coast spilled into high bluffs that overlooked the sea. The Big River cut its way into the coastline, where salmon leaped from rapid to rapid in search of their spawning holes. It was an ideal setting.

The world had changed dramatically since his early days on the shores of the Mississippi River. In the seventy years since his birth the world had gone from the horse and buggy to the space race. In the early years of the Cold War, the Russian satellite Sputnik had been launched, and Yuri Gagarin had become the first man to orbit Earth from space in 1961. In a challenge to his country's scientific community, then President John F Kennedy had declared the U.S. intention of putting a man on the Moon in that decade.

Fritz Zwicky settled into a seat in Humason's home as the interviewer began to ask Milt about the program to measure redshifts with Hubble. Every now and again the life he had left behind in Pasadena would catch up to him for a moment. Milt talked about the history of nebular research, of Slipher's early redshift, about the type of glass that was used in the early spectrographs and of the advances made with the Rayton lens that had made it possible to take the first large redshift of NGC 7619. He had trouble describing his feelings about that first redshift, only saying that it made him "happy to see it." At the mention of Palomar Milt reluctantly got up to get his records so that he could bear witness to the evidence properly. Although he had written on the subject of expansion during the heyday of the nebular program he was reticent about lending his opinion on the subject in print. Asked for his thoughts on the subject, Humason demurred, saying only, "I have always been rather happy that my end of—my part in the work—was, you might say fundamental." When the subject of Hubble came up Humason struck a protectionist tone, stopping the tape and glossing over the 20-year history between the two carefully, so as not to provoke suspicion that might harm his friend's legacy. As the interviewer wound down he asked Milt if he missed working at the observatory. "No, no, no," he said. "I want to fish and that's what I've been doing ever since I'm up here. Steelhead and salmon, that's my business now." Like everything else in his life, Milt enjoyed his retirement to its fullest, fishing the rivers and waters of northern California until his death on June 18, 1972.

Milton La Salle Humason belongs to a unique group of men and women through the ages who pioneered in subtle ways to help broaden our view of the world around us. In a field where people worked tirelessly to promote their work and intellect, his quiet, homespun nature and sense of justice were irrepressibly charming. Although plagued by them earlier in his career, Humason learned to make peace with his insecurities, endlessly promoting those around him and never taking credit where he felt it wasn't warranted. If in the end more credit was due him than he accepted, those around him knew it and did their best to make sure the rest of the world did, too. Humason had the respect of some of the titans of astronomy—Adams, Merrill, Hubble, Sandage, Mayall, Baade and many others from around the world—who knew and understood implicitly his contribution to the advancement of science in their time.

What makes his story even more remarkable is the humble roots from which he rose, from a barefoot boy skipping stones in the Mississippi River in Winona, Minnesota, to the wide-eyed young muleskinner astride his horse on the narrow trails of Mount Wilson to Pasadena orange rancher, husband and father, to observatory janitor and on to his meteoric rise to the top of the astronomy world.

A simple, down to Earth and charismatic man, Humason had a reputation for being kind and amicable as well as mischievous and witty. He was by all accounts an excellent storyteller and could empty pockets around a poker table quicker than you can say, "Deal me in." These qualities and more are what later prompted Humason's protégé, friend and collaborator, Allan Sandage, to refer to him as "a superlative mule driver, fisherman, imprecationist, drinker, poker player, raconteur, rake and rogue, gentleman and friend."

As a scientist, Humason was slightly more complex than the trail-riding cowboy of his early days on Mount Wilson might suggest. Although ambivalent toward and fearful of seeking fame, he was, to some extent, tempted by its trappings. But Humason was, more than anything, guided and dazzled by the twinkling jewels in the sky, and in his pursuit to understand their mysteries, he became a most careful, meticulous, and ingenious technician. His pioneering work in a rugged and somewhat dangerous field (in the days before modern technology made observing simpler) stand in testament to his dedication and skill. Driven by curiosity and his love for his craft, Humason always strove to understand everything he could about the art and technology of stellar photography and worked with others to improve the instruments of the field.

The complexity in him only showed when the pale light of public interest was cast upon him. In these moments he found no structure from his own past to stand upon. Not one given to ostentatious displays, in these circumstances he simply demurred, and in the process shrouded his very worthy story in secrecy for years. Plainspoken and lacking the kind of formal education that might have cured some of his insecurities, Humason navigated through numerous interviews, public speaking engagements, photographs and calls of an interested public before ducking into the crowd.

He was even reluctant to get involved in print. When his cousin, Thomas A. Humason, Jr., an editor at Harcourt, Brace and Company, wrote Milt in October of 1950 (shortly after Humason had been awarded his honorary degree from the University of Lund), to ask him if he would like to write a book on the current state of astronomical discovery, Milt declined, saying, "It is true, as you say, that a book (to rank with the works of Jeans and Eddington) is needed now...It is certainly most kind of you to think of me in this connection—but I am not a writer!" He adds that, even if he did qualify for the job on a technical level, he lacked the literary skills to undertake the task.

This exchange is illustrative of all Humason's dealings with the public. Although he was more than qualified to write a book on the subject at the time when his cousin offered it to him, Humason viewed his literary ability as not being in step with his level of understanding of various subjects surrounding stellar, galactic and the universe's evolution. In this small way, Humason denied us a unique and singular voice in the field of science. A book on the stars written from the perspective of an old muleskinner turned astronomer would no doubt have been a delightful departure from the staid and stolid prose of the scientific community of his era.

The other argument to be made, however, is that Humason not only knew his place but was more than content to remain in it. In fact, he really enjoyed it, remaining at the helm of the giant reflectors on Mount Palomar and Mount Wilson until he was in his seventies, well into his retirement and mentoring others in the science that had given him so much. This sense of objectivity is a trait all too often taken for granted in the world today.

His personal attributes made Humason a friend to virtually everyone around him and a valuable partner and ally in the occasionally volatile world of competitive science. When combined with his skill and experience, Milt's character made him an excellent teacher. As his friend and collaborator, Nick Mayall, would later recall: "Milton Humason was the best mentor (at the observatory). He really knew nearly everything about each telescope, auxiliary instrument, and person on the mountain." All of these traits had been carefully learned throughout his life on Mount Wilson.

Whatever the causes or consequences of his character, there is little doubt of Humason's contribution to science. Probably the twentieth-century's most skilled stellar photographer, Humason revealed data on worlds never before seen and collaborated on some of the greatest discoveries of any age, chief among them universal expansion, to which he lent considerable evidence. As an administrator Humason was always aware of the needs of the staff and was known to be fair to virtually every man at the observatory, with the notable exception of election season. In scheduling observing time on Election Day, Humason quietly made sure the Democrats on the staff were on the mountain, rendering it impossible for them to make it to the polls to cast their votes. Noticing this Allan Sandage, who knew Milt to be a "rabid Republican," approached the aging secretary to ask him how such a coincidence could occur every Election Day. Humason was contrite on the matter, confessing to the slight without batting an eye. When Sandage once complained in outrage Humason informed him that if he didn't like it he should talk to Seth Nicholson, who had been doing the same thing to the Republicans on the solar staff for years!

As a scientist, Milton Humason lent his incredible skill and dedication to the discoveries of stellar and galactic evolution, helping to pave the way forward in our quest to understand the universe and setting a standard for generations of researchers. As a man, he was a loyal and highly entertaining friend, a devoted husband and that seemingly rare individual who was acutely aware of his place and always tried to treat those around him with respect. Fritz Zwicky once wrote in ode to Humason, "He always had the goal of a sound society and a beautiful world in mind," a statement that, if he had heard it, would have made Milt simply shrug his shoulders and deal the cards. Still, there is no discounting the grace and charm of the rugged Renaissance man of Mount Wilson, who climbed to the peak of the mountain and ventured hundreds of trillions of miles into the known universe. If one could imagine him having to write his own epitaph he would undoubtedly have kept it simple...

Gone fishing!

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