

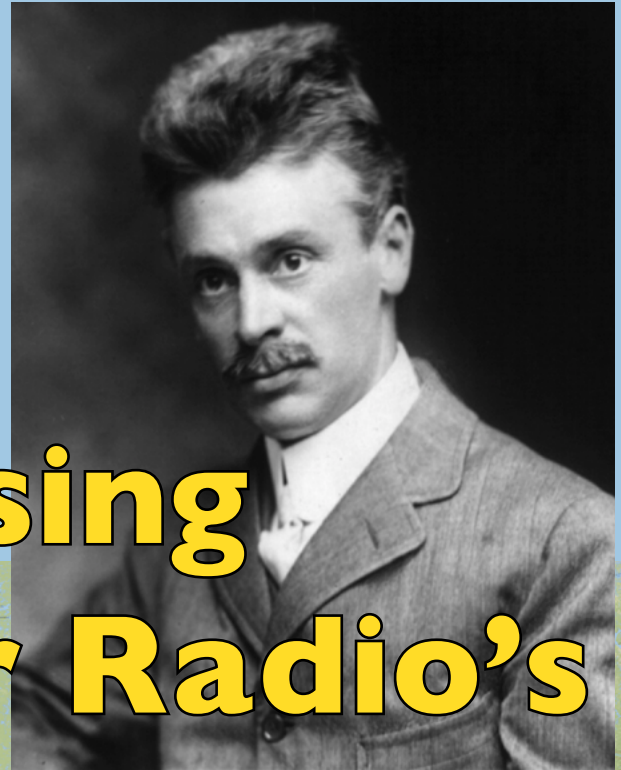
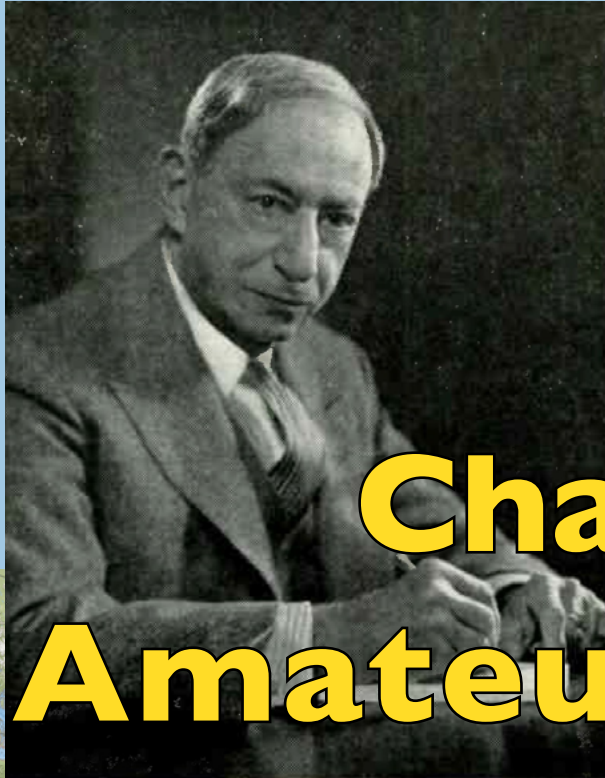
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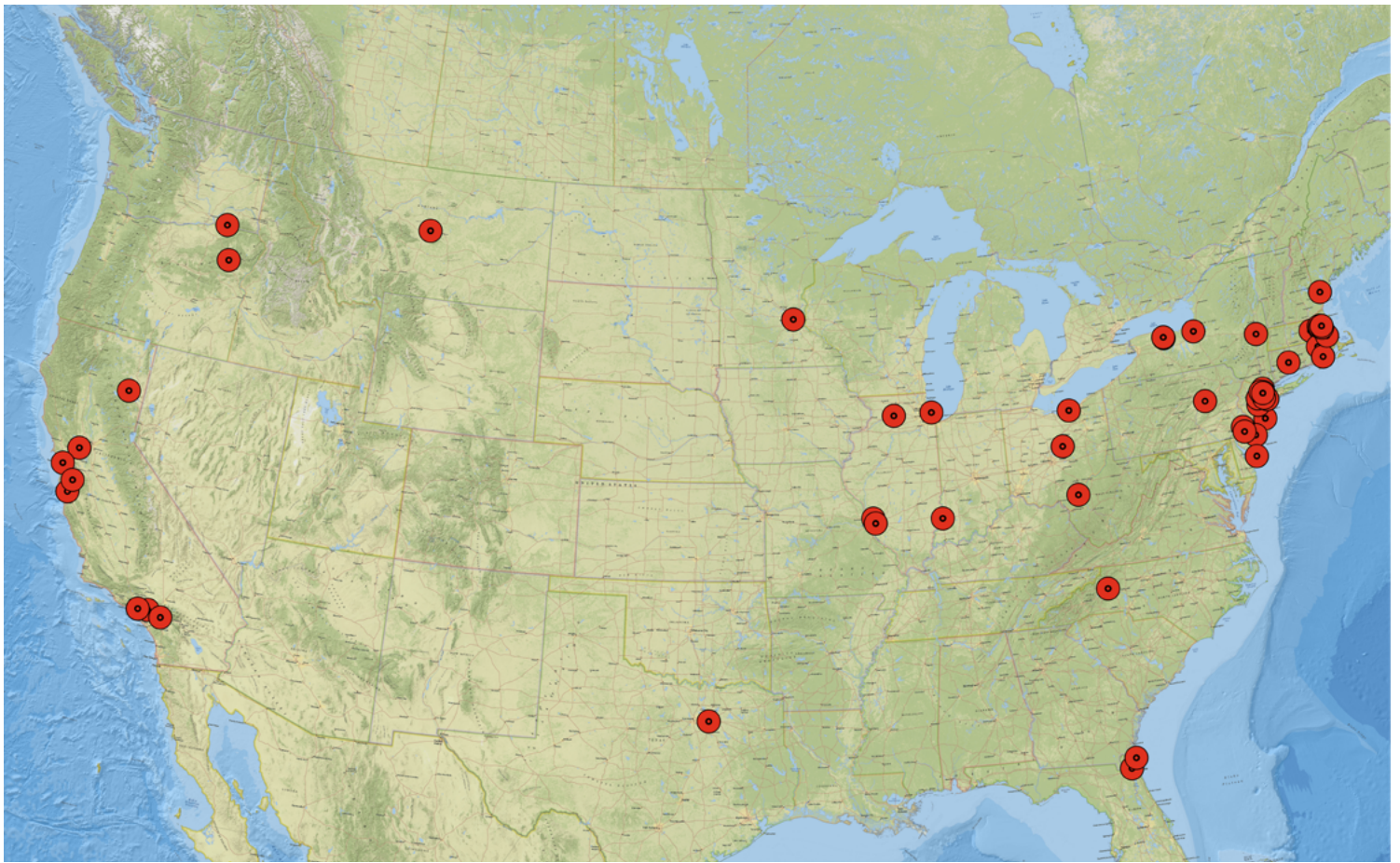
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Map depicting locations of amateur radio's 'Lost Tribe,' 1909. (Courtesy of the author)

Amateur Radio's Lost Tribe: The 'Blue-Collar Scholars' Who Started it All

By Frank M. Howell PhD K4FMH

Amateur radio is nothing if not tradition laden. Tradition can be an effective part of a hobby or group because it maintains a sense of common history to socialize newcomers into the hobby as well as providing a central focus on long-term group activities. The history of a hobby is a key and enduring part of this set of cultural traditions. But if history as written and received is incomplete in important ways, this tradition misleads and misguides newcomers and veterans alike. Moreover, it may stifle future innovation due to the "thought police" behavior that traditionalists ritualistically perform. (73s anyone?)

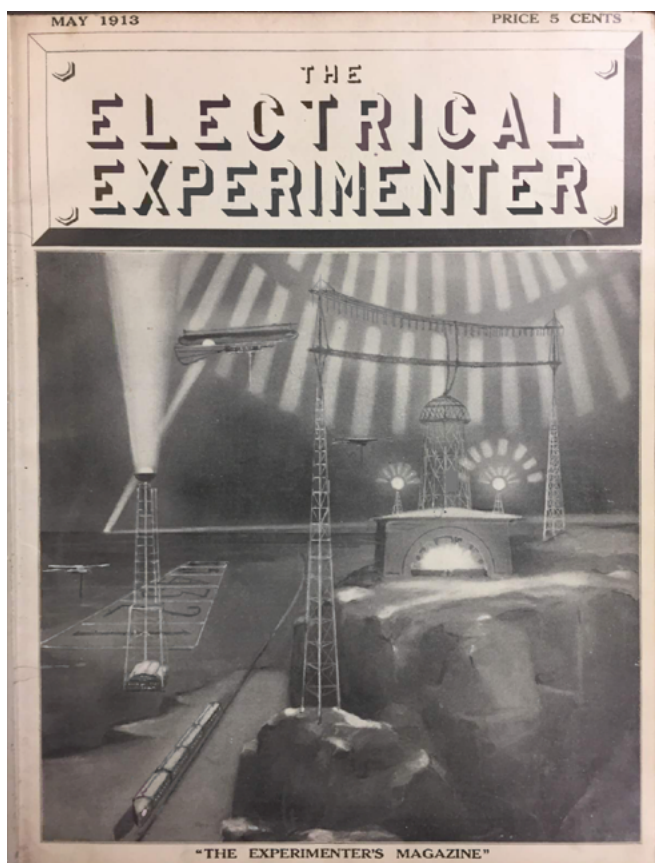
In this article, I recover some strategic lost history of US amateur radio. My focus is on the "lost tribe" of the earliest amateur radio operators who were in existence before there was an American Radio Relay League; before there were government issued licenses; and before there were strict guidelines as to "what" ham radio was. Then, ham radio was whatever ham operators did. It gave the foundation for what was to come as the federal government created a le-

gal basis for administering the radio waves as a public good. Yet, amateur radio operators in the US today hardly know anything about them because of the "Maxim Mythology" that exists and is perpetuated in our most common formal history of amateur radio in the US. This is why I characterize them as the important Lost Tribe. Let me tell you about them and how they got lost to our current history.

Folklore about the Early Organization of Amateur Radio

To illustrate, consider how the ARRL chooses to feature the history of amateur radio in the official timeline published during the 2014 Centennial celebration.⁽¹⁾ There is only a mention of the Junior Wireless Club being formed in 1909 (now Radio Club of America) followed by government licensing in 1912 and the formation by Maxim and Tuska of the League in 1914. The explicit narrative is ensconced in the Forward of the 50-year anniversary:

"In May, 1914, a small band of radio amateurs led by



Before there was the ARRL and QST magazine, there was Hugo Gernsback's Electrical Experimenter. It was the successor to his earlier publication, Modern Electrics, which began in 1908. (Courtesy: WorldRadioHistory.com)

the late Hiram Percy Maxim, of [Maxim] Silencer fame, and Clarence Tuska, started a national organization and named it the American Radio Relay League. Since that time the story of amateur radio has been the history of the League, the chronicle of amateurs working together for the public welfare and for their common good.” (Huntoon 1965).

On the ARRL website, there is erratic mention of Tuska being a co-founder with Maxim at times being labeled as Founder. A search of this website for a central figure in this story, Hugo Gernsback, returns only a single article from a contributing ham about the former's book, 'The Wireless Telephone,' found at a flea market.⁽²⁾ This is a narrative of a public relations rendition of the history of amateur radio, not one based upon the narrative obtained through the written materials and pictures of the early 1900s. There are perhaps some historical reasons for the League's omissions, involving competition and conflict by the ARRL with Gernsback. But some of that omission is now corrected in this article.

In my research, I used early amateur radio and related successive publications supplemented by US Census archives, genealogy records and the use of geographic information systems (GIS). As I describe below, the context of early amateur radio in the US involved commercial publications and non-profit groups all attempting to organize the earliest amateur radio enthusiasts. These groups had various reasons, some for selling merchandise, others for public service. The first “tribe” consolidated into public form was a set

of “blue-collar scholars” who were figuring out this new-fangled wireless radio transmission and reception thing. This was years before the ARRL was founded. They did have a tribal leader who encouraged them directly through his various media outlets and sales of radio apparatus and, indeed, much like the much later-day *Popular Electronics*' monitoring calls, gave them call signs to use on the air.⁽³⁾ That person was none other than Hugo Gernsback of New York City.

Gernsback also published their names, locations, call signs, and strength of signals from their transmitters so that they not only knew about each other, but non-amateurs did, too. There were others trying to organize radio telegraphy enthusiasts for various reasons, but it was Gernsback who first reached out nationwide to give an organized tribal dimension to US wireless operator enthusiasts. I'll also use names such as Marconi, Fessenden, Clarence White, and de Forest in this brief story but let's set the stage first.

Tribes and Early Amateur Radio in the U.S.

One definition of tribe is “a social group of simple kind, the members of which speak a common dialect, have a single government, and act together for such common purposes” (W.H.R. Rivers, 1914). This set of emergent amateur radio enthusiasts were certainly organized in a simple way, through a small set of focused national magazines and a few local groups. They spoke a common technical dialect, of figuring out how radio telegraphy worked and how they could practice the art and science of it. They had a government body, not of the federal government but mostly of a new magazine publisher who gave them a sense of common direction, identities through call signs, and a common outlet to share their knowledge through the dialect of radio telegraphy. They were indeed an emergent tribe but one later lost to popular history.

I've constructed a timeline of key events in the social history of amateur radio here in the US in Table 1 (next page). which shows the emergence of technical wizards of the day including Tuska, Gernsback, Marconi and de Forest. But it also illustrates how the executive visionaries Maxim, Gernsback, White and Fessenden also led the launch of four main groups to lend organization to these “hams.” Not surprisingly, competition for product markets and conflict subsequently ensued. Critical events are denoted with a gray background.

The key date regarding the Lost Tribe involves Gernsback publishing the first public national listing of operating hams in 1909, called the Blue Book. This publication appeared six years before the ARRL would publish a list of members in a 1915 issue of *QST*. A competitor to both, the National Amateur Wireless Association (NAWA), founded by Marconi and associates, including Fessenden, claimed 114 members but only identified their states (Watson 1908). NAWA was mainly focused on assisting the military, a precocious activity that foretold the League's much later emphasis on public service communications.

Timeline of Key Events and the Historical Context of the Lost Tribe in U.S. Amateur Radio	
Year	Event (emphasis for critical elements)
1907	Amateur operators form the Bay Counties Wireless Telegraph Association (California) Hugo Gernsback is said to have sold the first "practical home radio and first amateur radio kit" Clarence Tuska began experimenting with wireless telegraphy
1908	Gernsback publishes <i>Modern Electrics</i> magazine. Announces Wireless Registry (October) Rival magazine, <i>Electrician and Mechanic</i> , launched a Wireless Club, claiming 114 members (September) The Bay Counties Amateur Wireless Club in operation (California)
1909	First amateur radio organization the Junior Wireless Club, Ltd of New York City formed, later becoming Radio Club of America (January) Gernsback of <i>Modern Electrics</i> started the Wireless Association of America Gernsback published the <i>Wireless Blue Book of the Wireless Association of America</i> , the first nationwide public listing of amateur radio operators, constituting the Lost Tribe . Amateur operators form the San Francisco Radio Club, Inc.
1910	Clarence Tuska buys electrolytic detector from Gernsback's E.I. Importing Company. Tuska consigned crystal radio to toy store bought by Maxim who cannot get it to work. Tuska tutors Maxim on the building of a better radio receiver. They form father-foster son bond and engage Maxim's son Hamilton in the radio hobby. " <i>Tuska worked with him and spent many an evening instructing Mr. Maxim and his son.</i> " (Tuska 1937)
1911	<i>Ship Act of 1911</i> requires licenses of maritime wireless operators
1912	<i>Radio Act of 1912</i> , all radio transmitters now were required to be licensed. Amateur radio restricted to 200 meters. Charles Stewart, later ARRL VP and primary lobbyist in DC, gave testimony.
1913	Clarence Tuska received government issued call sign 1WD Hiram Percy Maxim received government issued call sign 1WH Gernsback started another magazine, <i>The Electrical Experimenter</i> (May).
1914	Hartford Radio Club formed on January 14, 1914. First President was David Moore, Age 21. American Radio Relay League was founded by Hiram Percy Maxim and Clarence D. Tuska
1915	<i>QST</i> first published with list of American Radio Relay League List of Stations (December) Gernsback's <i>Modern Electrics</i> magazine ended Wireless Association of America and formed the Radio League of America with Tesla, Fessenden and de Forest as honorary members National Amateur Wireless Association founded, headed by Marconi with Clayton White, Editor of <i>The Wireless Age</i> magazine, as managing secretary. Announcement in all major New York City papers. Emphasis on assisting military Signal Corps.
1916	ARRL requests advertising in <i>The Electric Experimenter</i> . Gernsback declines. Conflict between the ARRL, the Gernsback publication and Wireless Association of America ensues without immediate resolve.
1917	US ham operation ceased by government due to WW I
1919	Amateur radio returned in the US (November) Gernsback publishes first <i>Radio Amateur News</i> magazine
1923	Gernsback publishes first science-fiction articles in <i>Science and Invention</i> magazine. It begins his eventual transformation to SciFi publishing and a writer's award in his name
1929	Gernsback publishes <i>Radio Craft</i> , a magazine for the radio constructor.

Table 1: Timeline of Key Events and the Historical Context of the Lost Tribe in U.S. Amateur Radio

The Junior Wireless Club of New York, while in a hotbed of radio innovation, remained locally oriented until years later. Rebranded as the Radio Club of America (Burghard), their history shows little competition with the ARRL. Many other local clubs, such as in San Francisco and the Bay Counties, also appeared. There were clearly numerous emergent organizations all vying to catalyze enthusiasts of wireless telegraphy as amateurs (DeSoto 1936). Yet it was Gernsback and his allies who provided the first successful "Pied Piper" effort to publicly meet the definition of a tribe. As we will see below, the Pied Piper metaphor fits very well.⁽⁴⁾

As a key element of this revisionist history, it's clear that it was Tuska who was the technical wunderkind, not Maxim. From his own words as published on the ARRL website (Tuska 1937: 4):

"The *Electrical Experimenter* indicated that there were other wireless experimenters in Hartford...Hadn't Hartford heard of the famous E.I. electrolytic? [Author note: E.I. was Gernsback's company]...A gentleman, Hiram Percy Maxim, had become interested in the wireless...Mr. Maxim had no experience but he was interested and wanted a good receiver...Mr. Maxim was then in the novice class. Ne {sic} needed some instruction. Tuska worked with him and spent many an evening instructing Mr. Maxim and his son. Hiram Percy Maxim learned quickly and was soon the owner and operator of a full-fledged amateur wireless station. His son

Hamilton Maxim was then about twelve years old. His younger mind outstripped his father's in learning the code, and he was a joint operator of the station, which was known as SNY."

Note that it was Gernsback's electrolytic detector that constituted Maxim's first receiver via Tuska. It was, in fact, Tuska's technical understanding and craftsmanship that led Maxim and his son into amateur radio which Maxim subsequently mastered.

Maxim became the Executive, collaborating with Tuska to visualize a Relay League of stations in 1914. He later worked with Charles Stewart to lobby Congress against the Navy's insistence on keeping "amateur" transmitters off the air after WWI (Warner, 1936: 9). Maxim was married to the daughter of the former Governor of Maryland, an entree into political networks in the nation's Capital. Undoubtedly, this gave Maxim some access to Herbert Hoover Jr., Secretary of Commerce, as noted in the ARRL memoir, '200 Meters and Down: The Story of Amateur Radio' (1936), written by the ARRL Secretary, Clinton B. DeSoto. By then, "the" story of US amateur radio was that proffered by the League.

The ARRL asked in 1916 to advertise in Gernsback's widely popular magazine, *The Electric Experimenter*, but was denied as a "competitor" at least three times. Maxim published the correspondence in a 1916 issue of *QST* "without comment" for the reader to assess (Maxim and Tuska 1916). A letter in that same *QST* issue complained about "all the leagues being formed," which were "unnecessary." (Stanley 1916). Conflict between the ARRL and Gernsback ruled the day.

By contrast, Marconi's group, focused on assisting the military Signal Corps, appeared largely out of the fray. No doubt the growing Marconi business enterprise captured most of his attention. Later, his affiliated magazine, *The Wireless Age*, did accept advertising from the ARRL. But this conflict between the publications of the League and Hugo Gernsback, and the ensuing bad blood between the principals, may be one of the organizational memories

Members of the Lost Tribe of U.S. Amateur Radio Operators, 1909			
Age	Name	City	State Occupation of Father (F), Son (s)
22	Neat M. Tate	Vacaville	CA Farmer (F)
16	Melvin M. Bonham +	Covina	CA Cement work-sidewalks (F)
12	S. Conradi Vance +	Los Angeles	CA Manager of Gas & Electric (F)
#	Ozone Wireless Co.	San Francisco	CA #
29	Frank E. Daubenbiss +	Capitola	CA Employed in Livery Stable (F); 1930: electrician (S)
#	Geo. And Fred Taylor	Susanville	CA #
20	Max Wells	Riverside	CA Employed as electrician in power-house (F)
16	Ray Newby	San Jose	CA Employed as an apprentice electrical worker (S)
49	Thos. I.P. Shannon *	Los Angeles	CA Employed as a driver for a packing company (S)
#	A.W. Pratt	Noroton	CT #
15	Cromwell Gibbons Jr +	Jacksonville	FL Lawyer (F)
#	Dr. Carroll H. Fink	Fernandina	FL Physician (S)
18	Earl Vogel	Ashton	IL Father owns farm (F) Son farms there (S)
16	Edwin R. Willard *	Chicago	IL Works on railroad (S)
15	Melvin Getchell	West Medford	MA Carpenter (F)
15	L.S. Stevens +	Marlboro	MA Employed as a box maker in a box factory (F)
19	Newell A. Thompson +	Brookline	MA Aunt (Head) is unemployed (F)
16	Philip Wood +	Arlington	MA Employed in manufacturing (F)
16	Kendall Bushnell +	Arlington	MA Employed as clergyman (F)
17	Ralph Damon	Whitman	MA Employed in dyeing and blocking in shoe factory (S)
11	Allen Lee Whitman +	Cambridge	MA Lawyer (F)
#	John Joseph Roderick Veary	Boston	MA #
17	Earle L.M. Coolidge	Everett	MA Employed as a musician in an orchestra (F)
28	Chas. E. Spinney *	Sanford	ME Electrician at a mill (S)
21	Frederick Wommer	Minneapolis	MN Employed as a buyer at an automobile company (S)
20	David Marcus	St. Louis	MO Confection Store Owner (S)
#	J. Peters Jr.	Florissant	MO #
#	Meade N. Powell	St. Louis	MO #
27	E.D. Porter *	Lewistown	MT Employed as an electrician (S)
#	V. S. Ivey	Lenoir	NC #
16	Coke Flanagan	Montclair	NJ Lawyer (F)
#	L. Spangenberg	Paterson	NJ #
17	Jas. McNair Jr.	Lakewood	NJ Electrician (S)
18	Albert Higson +	Jersey City	NJ Employed as real estate salesman (F)
#	F.R. Breck	Bayone	NJ #
#	W.N. Broz	Cape May	NJ #
16	R.P. Wilson +	Metuchen	NJ Checker on railroad line
#	H. Bassett	Shorthills	NJ #
#	J.R. Carty	Shorthills	NJ #
#	Frank McGram	Jersey City	NJ #
#	R.S. Burt	North Paterson	NJ #
#	B. Frank Rittenhouse	N. Woodbury	NJ #
#	W. Zimmerman	Hasbrouck Heights	NJ #
16	Fred Klingensmidt +	New York	NY Restaurant Owner (F)
17	Bowden Washington	New York	NY 1920: Radio Engineer-Telegraphy (S)
15	John D. Kattenhorn Jr.	New York	NY Not employed-Brother is bartender (F)
17	Eric Leavens	Brooklyn	NY 920: Inspector at Insurance Co (S)
20	Ralph Jeffers	Rochester	NY Electrician in a shop (S)
24	J.O. Smith	New York	NY Owner, Art Design Business (S)
21	H.E. Sumner	Brooklyn	NY Clerk, Lumber Yard (S)
14	Maxwell P. Hellman	New York	NY Employed in Silk Factory

Table 2: Members of the Lost Tribe of US Amateurs 1909

leading to the omission of the many undeniable contributions made by Gernsback in their narrative of amateur radio in the US.

The League subsequently won the war of who would eventually organize amateur radio in the United States. The National Amateur Wireless Association founded by Marconi (White 1915), announced prominently in most New York papers, largely disappeared from print within a decade. The transition by Gernsback from the WAA to the Radio League of America, clearly a competition of identity with the ARRL in the battles of 1915-16, also faded within a decade. This may have been due to Gernsback's drift into science fiction publishing which would eventually lead to an award in his name for that genre.

Clearly, Hiram Percy Maxim was not only a brilliant inventor of the gun silencer and automotive mufflers but an astute and effective executive in the art of building and managing a large organization. But it was Gernsback who gave technical education to the masses (including both Tuska and Maxim!) a venue with which to identify (Wireless Association of America), and a public identity as a tribe through individual name, location and station details in the Blue Books.

Who were these "blue-collar scholars" who made amateur radio possible by getting their gear built and regularly on the air waves? Where were they? What was their background?

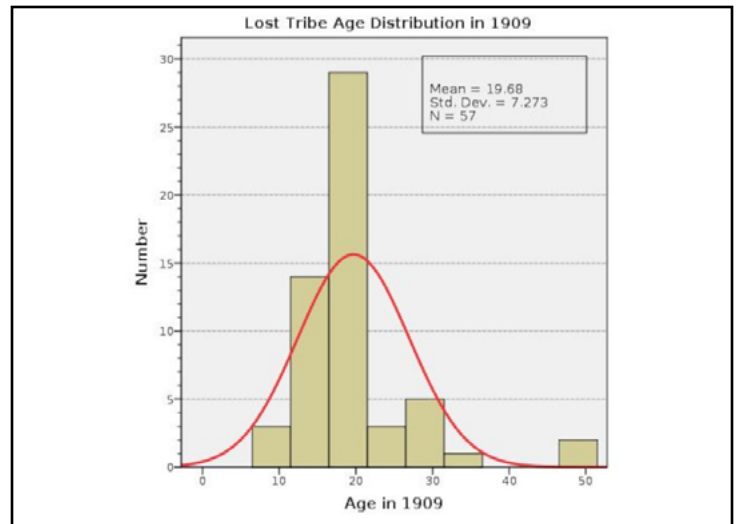


Table 3: Average age of amateurs in 1909

The Lost Tribe of Blue-Collar Scholars

The members of the Tribe from the first Blue Book are listed in Table 2 (Gernsback 1909) at left. I've shown those not in the 1910 or subsequent Public Census records with a no information marker. A few were either a school or business. However, most (73 percent) were located to identify year of birth, race, sex, school attendance, and (household head or son's) occupation. All were white boys or men. The majority were young men with an average age of 19.6 years (standard deviation of 7.2 years). The preponderance of boys and young men is striking as shown in Table 3 (above) as a histogram of age in 1909. It was a "kid's game" of sorts, in large measure—very few adult men joined this tribe. That is ironic given the aging ham operator population in the U.S. today (Howell 2020).

Note that a couple of extremes are in these data. A 9-year-old, George Schmidt of New York City, and a 10-year-old, William Wilson, also of New York, were operators. Wilson became an engineer by age 40. Two older married men also were part of the Tribe. Thomas Shannon, age 49, resided in Los Angeles, working as a truck driver. A plumber, Jack Steurer of New York City, was also 49. Both were clearly "old timers" in the Tribe. One oddity was Dr. Carroll H. Fink, a physician near Jacksonville, Florida. He was not found in the public Census or genealogy files yet was prominently noted in the Blue Book. Young Bowden Washington, age 17, was to become a radio telegrapher by 1920 as was J.B. Hyatt in Ohio. Others were employed in electrical work as electricians (e.g., Charles Spinney, Maine).

Where the tribe member was a student and not employed, I've included the household head's occupation. With few exceptions (e.g., a couple of lawyers), all were employed in the retail, manufacturing trades, services, or farming: blue collar work. The professional influence by attorneys, the physician, the musician or art designer is exceptional. The dominance of blue-collar work by the household head on the radio amateur is unmistakable for those that were identified through public Census records. Hence, I've labeled the Tribe

as blue-collar scholars who helped amateur radio become a social movement in the United States.

The Gernsback-as-Pied Piper in the *Electrical Experimenter* served to play to the imaginations that changed the succeeding generations through radio science as hobby. To understand this, the reader only needs to recall what *Popular Electronics* did for so many boys, and a few adult men, when it offered “short wave listener” call signs, run at the time by Tom Kneitel through *Popular Electronics* and the US Postal Service (Herkimer)—far less than what Gernsback did a half century before.

The map at the head of this article contains the tribe on a map display, illustrating the specific geographic concentrations. The graph expresses these concentrations more succinctly as a count by state. They were located largely in the Northeast states of New York, New Jersey and Massachusetts and the West Coast of San Francisco’s Bay Area and Los Angeles. The key clusters in the greater New York area and in the Bay Area correspond to a few of the key events in the timeline. The early clubs were being formed on the West Coast simultaneously to those in the localized hotbed of greater New York City as noted in the timeline. This pattern, along with those scattered throughout parts of the US, reflects the impact that the Wireless Association of America, through *The Electrical Experimenter* and *Modern Electrics* magazines, had during this formative period.

Some Revised History: The Pied Piper and the Chief Executive

The official story of amateur radio offered by the ARRL through League Secretary DeSoto in ‘200 Meters and Down: The Story of Amateur Radio’ does give some note to Gernsback’s efforts. On page 24, he writes of him as a “promoter” of amateur as follows:

“Another organization was also being formed in January, 1909—one of much greater pretensions. The Wireless Association of America was a child of Hugo Gernsback, publisher of *Modern Electrics*. After the first few months of its existence, Gernsback announced a membership totaling 3200. By November, 1910, he claimed that this number had jumped to 10,000. It was easy to recruit members for such an organization; there were no dues and no obligations. Youthful electrical experimenters signed up in swarms, attracted by the famous names in the honorary membership group and the ease becoming a member. The membership represented a fairly accurate index of national interest in radio, although not, of course, of the number of active transmitters. Even so, the number of worthwhile amateur stations on the air had, according to conservative observers, increased from perhaps one hundred fifty in 1905 to five or six hundred.” (DeSoto 1936: 24).

The ARRL’s 1936 official story of amateur radio did indeed acknowledge Gernsback as Pied Piper of youthful experimenters, albeit characterizing his count as “claims” while giving full credit to the League’s “conservative obser-

ventions.” And, moreover, it gave the WAA its due as a “fairly accurate index” of interest around the country in amateur radio. But by its 50-year anniversary, the League Secretary Huntoon stated that “Since that time the story of amateur radio has been the history of the League.” (Huntoon 1965). Having won the competition amongst the various groups seeking to organize amateur radio, the official public relations story was changing.

In the 2014 Centennial celebration of the League, the ARRL’s timeline had indeed forgotten its own published record of formative events (American Radio Relay League). In this official timeline, there is only a notation of the Wireless Club of New York followed by the formation of the ARRL by Maxim and Tuska in 1914. In Maxwell’s *QST* article on the 100th Anniversary of amateur radio itself, he notes the importance of recounting amateur radio history: “..as will be seen as we progress through the events of this past century, there is much to be learned from our history.” (Maxwell 2000). As he later writes in that article, however, there is only a mention of Hiram Percy Maxim, sans Clarence Tuska, in attributing organization to amateur radio in the US: “Some hams had extended their effective range by relaying messages through others, but it took a Hartford, Connecticut ham, Hiram Percy Maxim, 1WH (later 1AW) to recognize that messages could be sent more reliably over long distances if relay stations were organized.” The “Maxim Mythology” was by then complete.

From any careful and objective reading of the literature of that era, it is clear that Hugo Gernsback gave national identification to amateurs, publicizing a listing with call signs which gave them a public identity. His magazines and commercial company, Electro Importing, gave a venue through which members of the Lost Tribe (as well as those who did not join) could communicate with others using a common language of the day regarding amateur radio. These blue-collar scholars were the lifeblood of amateur radio’s rise in the United States. Even Maxim benefited from Gernsback’s electrical products through Tuska’s building of Maxim’s radio set and tutoring “novice” Maxim and his son, Hamilton, into the hobby.

What is also clear is that it was Hiram Percy Maxim who won the war over who was going to succeed in being the dominant organizational force in the ham world. Maxim and Tuska co-founded the ARRL but Tuska subsequently went into the military and then commercial radio to support his mother, grandmother and himself as “head of household” (Lee 2014). Maxim, the Executive, protected amateur radio from Navy objections with Secretary Hoover through Maxim’s political network, no doubt enhanced by his deceased father in-law, the former Governor of Maryland, and Charles Stewart’s effective lobbying in Washington, DC. He later became Vice President of the ARRL (Lee 2014).

My characterization of Gernsback as the Pied Piper who led young boys and men into the hobby reflects the historical facts from the existing literature of that era. Maxim was the Executive who learned the technical side from his

young associate Tuska, partnering with him and giving financial assistance to form the League. Maxim powerfully led the ARRL to be the dominant organization that it ultimately became over the years. That, too, fits the existing literature but it is at variance with the “Maxim Mythology” created and perpetuated over the decades by the public relations arm of the League.

That is the mission of public relations professionals but not of historians. From the time of DeSoto to Huntoon to Maxwell in writing sequential official ARRL narratives of US amateur radio history for the League, the transference of the credit from a token mention of Gernsback’s 10,000 strong membership in WAA by DeSoto to Maxwell’s rendition of it taking Maxim to get amateur radio organized, with nary a mention of Tuska, the mythology was complete. Along the way, the Tribe and their leader got “lost” in the League narratives. Without the original amateur radio enthusiasts, there would have been no need for a national organization.

It’s unfortunate that those who got us here are not honored in the official history narratives by the League or other associations. That is a public relations choice but not an accurate history. As Maxwell himself said in the *QST* article on the 100-year history: “there is much to be learned from our history.” I hope that this brief article does indeed reveal more about the blue-collar scholars that Hugo Gernsback led into the fold in the Lost Tribe.⁽⁶⁾

About the Author:

Frank M. Howell K4FMH holds a PhD in sociology and statistics and is Professor Emeritus at Mississippi State University. He received his amateur radio license in 2010 while serving on the Chancellor’s staff of the Board of Regents in Atlanta, GA. Frank is ARRL Assistant Director for the Delta Division and supports the Volunteer Monitor Program. He is a Presenter on the ICQ Podcast (icqpodcast.com). More about him can be found at k4fmh.com. This article continues his career-long research into social movements in the U.S.

Notes

1 See electronic resource: <http://www.arrl.org/files/file/Centennial%202014/ARRL-Timeline-Final.pdf>. Retrieved September 1, 2021.

2 See Bradshaw Lupton Jr, K1TE, “Radio Before Radio,” at <http://www.arrl.org/radio-before-radio>. Retrieved September 1, 2021.

3 For readers unfamiliar with the defunct magazine, *Popular Electronics*, and their “shortwave monitoring call sign program,” see John Herkimer, “The “WPE” Monitor Registration Program,” (<http://www.ontheshortwaves.com/WPEhtml>). Retrieved September 2, 2021.

4 For the story of the Pied Piper, see Andrea Diamond, “The Legend of the Pied Piper,”

5 More information will be published at my website, fox-mikehotel.com, along with an interactive map of both the Lost Tribe and those listed in the 1915 *QST* of their members.

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