



episode 10 (2018 October) *Buried Treasure, Lost Treasure*

*Heather:* Hello everyone! Welcome to the tenth episode of the RASC 150 History Podcast, in which we use our Archimedean wiles to pry the lid off the Society’s cookie jar marked “intriguing artifacts; enter at your own risk”, etc., to see what we can uncover in our search for treasures of our past. My name is Heather Laird, I am a Director of The Royal Astronomical Society of Canada, and you’ll meet my co-host, the RASC Archivist Randall Rosenfeld, imminently. Randall has promised me (or warned me; I forget which) that some of these will be spectral ghosts of artifacts which are, alas, no longer with us.

*[sounds of wind stirring autumnal leaves, while we can hear Heather’s footsteps as she approaches the Archives. These sounds continue under her monologue]* I’m just now approaching the obscurely hidden public portal to the Archives... What! Oh! Not again! Once more the obelisk has fallen, blocking access to the main entrance. We only just had that repaired. Must have been a gust of wind; or the grumpy racoons. That puts the sundial out of commission—as if that matters, given that it’s overcast. If you’ll just bear with me, we’ll go around to the other entrance.

*[Heather’s footsteps accompanied by more wind stirring autumnal leaves]* I think I can remember where it is... Ah, yes, it’s marked by that faintly ludicrous garden statue of the headless astrologer; funny, all the garden statues of astrologers seem to be headless—saves on production costs, I guess. These vault doors are so finicky *[sound of heavy vault doors being opened]*, and down the flight of stairs we go. Ah, here’s the candle stub and striker *[sound of the candle being lit; sound of Heather descending the steps, becoming increasingly cavernous]*. H’mm, looks like some graffiti. Let me get the light just right. It says “Montague... Rhodes... James”. That tag doesn’t look new. *[Heather sighs]* Still more steps... Another tag. This one is... “Horace... Walpole”. It’ll be hard to get that one out, it seems to have been engraved with a Roman stylus. Reminds me of that anonymous note we got after the last podcast. It read: “*Unless the RASC Archives truly becomes an oppressive tool of the patriarchy, and a media magnet,*

*you people are never getting a Banksy, not even one that eats itself*'. I'll have to speak to Randall about this.

And here we are! [*Raven call in the background*] This door knocker must date from when Pluto was still a planet [*impressive sound of the doorknocker— sound of footsteps approaching—sound of massive oak door opening*]. Say hello, Randall!

*Randall: [some mumbled greeting, or other].*

*Heather: What's on the docket today?*

*Randall: Artifact tales, pure and simple. Tales of interesting stuff the RASC has, and tales of stuff we once had. To be honest, I wonder if artifact tales are ever pure, or simple. Desire for astronomical gear, conflicting agendas for its use, and shifting claims for its ownership certainly complicate artifact stories. So, where to start?*

In the past, of course! Possessing stuff to do stuff, specifically astronomical stuff, to paraphrase the title of an earlier podcast in this series, didn't originate with our Society a century and a half ago.

*Heather: It didn't? Just kidding! Go on...*

*Randall: I will. Oh, did you water the pumpkins? Where were we? Oh, yes. Our chief apparatus for doing science is, and always has been ourselves; gathering evidence of the world around us with our senses, qualifying, quantifying, and analysing what our senses tell us in our attempts to make sense of the universe. Scientific tools, astronomical apparatus, are extensions to our senses to serve data collection. When the electromagnetic spectrum is explored outside of the wavelengths visible to us, and however the resulting data is processed, at the end of the day for us to make sense of it, it has to be offered up in a form we can sense. It would seem reasonable to speculate that the invention and acquisition of tools to extend our reach to the stars is of considerable antiquity.*

*Heather: Fascinating, I've never known anyone to put pumpkins to sleep by such discourse. Not being a pumpkin, I am awake enough to ask how far back are you going to site this?*

*Randall:* [*Randall mutters:* “Orange ingrates!”] To a certain extent any starting point will be arbitrary, but for our tradition I’ll affect to put it in antiquity. But, I’ll exercise my right—or well-informed whim—and start later in the fourteenth century. There are extant some inventories, and possibly some of the apparatus described, which belonged to the upper echelons of Society who were interested in astronomy. And who could afford to have the fourteenth-century equivalent of astrogear. Charles the Vth of France, who acquired the nickname Charles le Sage, possessed a dozen astrolabes, including one made of gold and two others made of silver, as well as impressive manuscripts on what we would now call science. It’s not surprising that he had impressive treasuries of learned and other bling, seeing that he was king of one of the wealthiest countries in Europe at the time. Unfortunately, most of his astronomical gear isn’t extant. In the following century Cardinal Nicholas of Cusa owned impressively functional astronomical equipment, and gratifyingly his torquetum and astrolabe survive to this day.

It might be found counterintuitive to many amateur astronomers today, but there is indeed a connection between cathedral and other church treasuries, and noble treasuries containing astronomical equipment. They often held many of the same classes of equipment. And the church treasuries were one of the models for *Kunstammern*, cabinets of curiosities, of the 17<sup>th</sup> and 18<sup>th</sup> centuries, which frequently included astronomical apparatus, and in which some early scientific societies were invited to meet or work by their patrons, and whose members owned more modest versions of such repositories. And these were often combined, or contiguous to associated libraries.

*Heather:* I find myself coming over all oracular—now that we’re up to the 17<sup>th</sup> century, that can only mean that you’re going to mention the Royal Society of London, for the Improving of Natural Knowledge. Tell me if I’m wrong (oh, and the pumpkins are still snoring).

*Randall:* Right you are! (Am I that predictable?). The Rev'd Thomas Spratt in his 1667 account of the Royal Society remarked: [quote] “*Here [at Gresham College] the Royal Society has one publick Room to meet in, another for a repository to keep their Instruments, Books, Rarities, Papers, and whatever else belongs to them...Of our chief and most wealthy Merchants, and Citizens, very many have*

*...bestow'd many considerable gifts on their Treasury, and Repository” [close quote].*

*Heather:* Can we get up to the present? Well, if not that, maybe to the 1890s?

*Randall:* Sure. You’ll remember from our August podcast on the Republic of Letters that the prestigious scientific societies of the 17<sup>th</sup> and 18<sup>th</sup> centuries were a model for the organization and ethos of the early RASC? Well, it was no different when it came to the possession of instruments to carry out science. Our 1890 Charter and Bylaws state that among the objects of the said Society are: [quote] *“To acquire and maintain a library and such apparatus and other property, both real and personal, as may be necessary and convenient for the due carrying out of the said objects of the Society”* [close quote].

*Heather:* Hey! That’s nearly the same as what’s in our present mandate: [quote] *“to acquire and maintain equipment, libraries and other property necessary for the pursuit of its aims”* [close quote]. That’s in direct continuity with our past. So the idea is we need this stuff to fulfill our place in Canadian Society, and prosecute the other functions in our mandate such as: [quote] *“to stimulate interest and to promote and increase knowledge in astronomy and related sciences”,* and *“to make contributions and render assistance to individuals and institutions engaged in the study and advancement of astronomy”* [close quote]. So our past plays an active role in what we are and what we do today.

*Randall:* And collect stuff we did, through either gift or purchase, to such effect that by 1896 the Society could boast that: [quote] *“[it should be congratulated] upon the possession of a really large collection of astronomical and physical works, all of which are useful, most of which are of a high standard of excellence and some of which, in addition to being very valuable, are rare and could only be replaced with difficulty, if at all. The collection is doubtless the best of its kind in Canada and may not have many superiors on this continent ...[it would be good if prospective] donors have the assurance that books and apparatus given to the Society will be safeguarded...”* [close quote].

*Heather:* The last are nice sentiments. How well did we do?

*Randall:* Now comes the telling of the artifact tales. I’ll give you a few examples.

In 1899 the Society's Librarian reported that he had purchased on behalf of the Society the first ever edition of the collected works of Galileo Galilei, published in two volumes in Bologna in 1656. That is quite a coup, and they'd certainly be worth something impressive today. Here, let me show them to you, you'll be really impressed...Oh, I can't, because they're no longer in our Archives' Rare Book Collection, since a certain person gave them to another institution for "safe keeping", possibly in the 1940s, apparently over the objections of Helen Hogg and Jack Heard. Well, maybe there's something else we can look at.

Oh, wait, there's this. In 1901, the Premier of Ontario acceded to the Society's request that we become the custodian of the orrery which belonged to the Province, and which up till then resided in the Legislative Library, and that we also become the custodian of the celestial globe that was in the Bureau of Mines. An orrery, a mechanical, moving model of the solar system. That would be really something to have. I wish I could tell you how old it was, and who made it, but I can't, because we no longer have it. We don't seem to have had custody of it since the 1950s, and it may very well have vanished earlier. We might, however, still possess the globe. If so, it's the 18-inch diameter celestial globe by W. & A.K. Johnston in our Archives.

Interested in some instrumental milestones of spectroscopy? In 1899 the great telescope maker, and Society member, John Brashear gave us what may have been our second, or even possibly third, Rowland grating. These are remarkable objects, a product of an ingenious technical development in ruling, which advanced astrophysics. And they create a beautiful shimmering effect when you turn them in the light. And, here they aren't, because, not only do we not possess the one we received from Uncle Johnny in 1899, but we don't in fact have any of them. They disappeared decades before even I was born.

*Heather:* This isn't looking so good. Is there anything with an Alberta connection?

*Randall:* Let me see [*sound of rummaging around*]. Ah! In 1901, J.B. Tyrrell of dinosaur fame, gave us a gift of: [quote] "*rare old copperplate prints of star charts*" [close quote]. H'mm, I wonder which they are, because they're not specified in our minutes, or early catalogues. Let's put a positive spin on this, and pretend that his gift is in fact one of the Georgian collections of copper engravings

in the Archives. I vote for the plates to Ferguson's astronomy, probably from the 1770s.

Want to see our copy of one of the most famous monuments to selenography, Beer and Mädler's *Mappa Selenographica* of 1836?

*Heather:* Sure!

*Randall:* So would I. It probably disappeared in the 1920s. This is so much fun!

Let me go on...In 1904 or thereabouts Mr. Weston Weatherbee gave us a magnificent 8-inch diameter primary mirror Brashear reflector on a massive equatorial mount, complete with all the accessories you can think of. This was a major gift at the time. A particular prominent person in the RASC's ranks decided that he'd lend it to an amateur friend for education and public outreach in Muskoka in 1936. The sentiment was good. The person who borrowed it duly returned it fourteen years later. There is no indication that he didn't look after it, although there is also no indication that it was used for education and outreach in cottage country. It then ended up being lent to an institution of higher education's physics department. Any trace of it disappears by the later 1960s. It would be nice to get it back—provided there's anything to "get back".

*Heather:* This podcast is turning into a sequence of horror stories, very seasonally appropriate. Even the pumpkins look engaged. Are there any less depressing artifact tales?

*Randall:* The imposing, barely portable refractor in the Archives is one. Note, it's *still* in the Archives!

*Heather:* I know, I saw it on the weekend. It does possess abundant old refractor charisma. The OTA looks fine, but the mount does have some rust on it. What's its story?

*Randall:* Finally, a marginally less depressing story! In 1901: [quote] "*It was moved by Mr. A.F. Miller, seconded by Mr. C.P. Sparling, and resolved, that the tender of Mr. C.R. Petry ([through] Charles Potter), for a telescope be accepted, and that such telescope be a Cooke and Sons four-inch-instrument, with bright black brass tube, finder, dew-shade and cap, three astronomical eye-pieces,*

(powers 60, 120, and 300), one solar eye-piece and three sun shades, in varnished pine case, no stand, the price in Toronto to be \$195” [close quote]. And later that year the minutes read: [quote] “Accounts were passed for a stand for the new 4” telescope” [close quote]. And, miraculously, we have all, or nearly all of it. The optical tube assembly is in fine condition, and when Walter MacDonald and I gave it a cursory examination, we could detect no fungus or any degradation on the optics. But the stand definitely needs work. How did it get that way? Because it had been kept for decades in a poorly secured, under-the-stairs closet outdoors, complete with dripping water and no climate control, in the RASC’s former building. I and a former RASC Executive Director rescued it.

*Heather:* In light of the previous artifact tales, it’s a minor miracle that it mostly survived. It’s odd how stuff can seemingly develop legs and walk off. Very curious.

*Randall:* No institution can be absolutely immune from attrition to its holdings, but it has to be admitted that the RASC’s past record in that regard has all too often been something other than stellar. We can only hope to do better in the future. If an institution can retain its current & cutting edge apparatus, it will in time find that its instruments have transitioned to being antique. In doing so, they gain other sorts of value, historical and symbolic. They can still be used to harvest science—the 4-inch aperture Cooke refractor from 1901 could do variable star work, or be used for experiments in rerunning observations from the “Golden Age” of Victorian observing. And it could feature in effective public outreach. But none of that can be done if they instruments don’t survive.

*Heather:* Thanks to everyone who tuned in, and we hope you enjoyed this podcast. If you have any questions, please visit [www.rasc.ca/rasc-2018-podcasts](http://www.rasc.ca/rasc-2018-podcasts) for contact details.

Our next podcast is scheduled for about this time next month, and is about the RASC’s response to the astronomical Spectacles of Nature.

Our sound engineer is Chelsea Body, and our theme music is by Eric Svilpis.