



2020 Annual Report to the Club

To be delivered at Annual Meeting 4/1/21

2020 was a most unusual year, of course, due to the pandemic known as Covid-19. In a matter of a few weeks, while public officials were recognizing the gravity of the situation and scrambling to institute measures to limit the spread of the virus, most of contemporary society shut down, including SMA with its public meetings and star parties. In the months following there was a slight relaxation of restrictions on activity but it was still not significant enough that our club could resume its physical meetings or outdoor activities. As this report is written there are now several effective vaccines that it is hoped will return normalcy to society, allow reopening of schools and other public venues, and reduce the amount of suffering and death caused by the virus. What the new normal will be has yet to be determined but the whole extraordinary experience forced SMA to adapt, and we did.

Our last public meeting was in March, 2020. It took several weeks before we reconsidered our plans and adapted to the use of Zoom as a platform. There were some growing pains in terms of getting club members to adopt the new approach, but there was a steady increase in the number of attendees as the year progressed. The positives of the experience were that it allowed SMA to reach out to a wider group of speakers, locally and around the country, to give us a more diverse palette of presenters.

Even though 2020 was the year of COVID, we were unexpectedly graced by Comet NEOWise in June, providing an exciting thing to observe and to photograph.

Listed below are meetings held in 2020:

January	Telescope Workshop
February	Cancelled – snow
March	Dr. Russ Pinizzotto, club member – the Color of Stars
April	Dr. Russ Pinizzotto, club member – What to See in Ursa Major
May	Ara Jerahian, club member – Introduction to Astrophotography
June	Ralph Pass, former mathematician at NASA – Apollo Mission reminiscences
July	Dr. Ryan Hickox, Dartmouth College – “Light from the Void: the Next Generation of Space-based Telescopes”
August	Member Short Presentations: reprise of Birr Castle telescope; The Perseids; Voyager update
September	Dr. Jack Gelfand, club member – building a backyard device to measure the temperature of the Cosmic Microwave Background radiation
October	Tom Field, President, Field Tested Systems, LLC – “You Can Almost Touch the Stars” – Spectroscopy for Amateur Astronomers
November	Sarah Betti, Ph.D. candidate, UMass, “Planet Formation in Protoplanetary Discs”

December Dr. Aileen Yingst, Planetary Science Institute, "Big News from a Dwarf Planet: The Story of Vesta"

Thanks to the significant work of club member **Dr. Russ Pinizzotto**, each of our meetings in 2020 contained an enticing tour of amazing objects to see in various constellations. Russ generally chose those that were high in the sky or crossing the meridian during the month of presentation so they would be easy to observe. Each tour highlighted classical illustrations of the constellation, and selections from Messier, NGC, IC, SAO, Hershel and other catalogues such as double stars, variable stars, open and globular star clusters, planetary and other nebulae, galaxies and at least one very unusual object. Russ identified those that could be easily seen in binoculars and others that required a small telescope. These presentations have been very popular conclusions to each meeting. In 2020 Russ toured the following constellations: January - Cassiopeia; March – Canes Major; April – Ursa Major; May - Hydra; June – Canes Venatici; July – Draco; August – Scorpius; September – Cepheus; October – Cygnus; November – Andromeda; and December – Perseus.

Because of COVID the Club was able to offer only one star party in 2020. The club worked collaboratively with the Cathance River Education Alliance in Topsham to try to put together an event for September. However, the current COVID restrictions, plus a growth in cases that increased public apprehension about gatherings caused postponement of the event until sometime in 2021. The Club also worked with Cornerstones of Science to conduct a "Safe and Sane" Star Party in October that required pre-registration, health questionnaires, commitment to masks and social distancing and which would consist of only laser tours of constellations and Revolution Imager projections onto a small LED screen. The first event date was cancelled due to weather; the back-up date garnered only two participants and clouded over shortly after dark. As will be discussed below, the Club is now preparing for "electronically-assisted astronomy" in 2021 to deal with continued COVID restrictions.

Despite the limitations of COVID, the Club was very active as evidenced by the following undertakings in 2020:

- **Rob Burgess** delivered the keynote address, "Let There Be Dark," to the Friends of Merrymeeting Bay's Annual Meeting in January 2020 on the topic of light pollution and how it can be controlled. FOMB is a 450+ member organization concerned with the ecological health of Merrymeeting Bay, the confluence of the Androscoggin and Kennebec Rivers before they enter the sea.
- Posters announcing SMA meetings: **Member James Shields' daughter, Madeleine**, designed a very attractive poster promoting SMA and its meetings for display on community bulletin boards, in libraries, coffee shops and college campuses. Posters were printed in 11x17 format and were ready for distribution until COVID hit and delayed distribution.
- Club Member **Jon Wallace** graced us with almost daily images of the Sun, finding a way to combine images into movie format and amazing us with close-up images of astounding solar prominences. The inclusion of the blue dot (Earth) into his images for reference gave us an incredible perspective of relative size. With the start of Solar Cycle 25, and more sunspot activity, the Club awaits more of Jon's work.

- Club Member **Dave Thibeault** continued to hone his DSLR skills in capturing remarkably beautiful celestial landscapes of the Milky Way at Kettle Cove and Comet NEOWise and shared them with the Club. Thank you Dave.
- Facebook presence: **James Shields** established a Facebook page for SMA to expand the places where interested persons might find us. James continues to serve as an Astronomy Merit Badge Counselor and conducts star parties for the Scarborough Girl Scouts.
- Director **Al DiSabitino** developed a priorities checklist for each standing committee of the Club based on a helpful article on club organization and function that appeared in the *Reflector* magazine published by the Astronomical League. That checklist has proven very helpful and is used at each directors' meeting to hold us all accountable to club objectives.
- **Committee Work:** the Membership Committee undertook a new survey of the membership on several topics, obtaining a 45% response rate which was a very positive level of participation. That Committee has also assumed many of the duties previously performed by Club Treasurer, Ron Thompson, for the last 15 years – a tall order as all have discovered.
- **Move to Brunswick Landing:** the Club made its first move to a permanent facility by sharing leased space with Teens to Trails, a non-profit that promotes outdoor activities for teens through high school outing clubs. The new address, 179 Neptune Drive, offers shared office space including wifi; conference room space, bathrooms and kitchen facilities, ample parking and a reasonably good observing platform for star parties. Perhaps of most value to the Club is shared use of a brand new 8x16 storage shed that Teens to Trails was able to have built through donated materials and labor. This space will allow the consolidation of club equipment from various members' basements and garages so that it can be put to better use. It will also permit the oft-discussed equipment lending program of certain club telescopes. While the club will continue to offer star parties throughout its footprint, having a central location for equipment and administration will be a boon and should promote more activity now that equipment will be readily at hand. The Club has already collaborated with Teens to Trails in presenting at an hour-long zoom meeting about what to observe and resources for doing so. With two other tenants in the building – the Brunswick Topsham Land Trust and the Cathance River Education Alliance – we expect there will be even more opportunity to collaborate and grow our membership.
- **Newly designed website:** Club Member **Ara Jerahian** redesigned and re-platformed the Club website. While the site is still under construction with new features being added, it now offers the capability for members and others to pay dues, as well as make donations, online. Ara also migrated the Club from Yahoo Group to Google Groups, and Ara continues to grace us with his amazing astrophotography, particularly of dark nebulae.
- Club member **Earl Raymond** is an active member of Friends of Katahdin Woods and Waters National Monument in northern Maine and was a participant in the effort that secured for the site the International Dark Sky Association's designation of Dark Sky Sanctuary – the first in Maine and the first in the East!
- Club Members **Paul Howell** and **Ara Jerahian** had their images chosen as **Astronomy Picture of the Day** by NASA. Given the level of imaging by professionals and by amateurs around the

world, having one's work selected is an amazing and distinguished honor! Having two from our Club is truly remarkable! Please see Ara's astrophoto of Lynds Dark Nebula 1251, selected for 03 July 2020, at (<https://apod.nasa.gov/apod/ap200703.html>) and Paul's image entitled "Unwinding M51," selected for 21 August 2020, at (<https://apod.nasa.gov/apod/ap200821.html>). Congratulations to Paul and Ara!

- **Sale of unused club equipment:** several years ago a 16" Meade Newtonian was donated to the Club by the sisters of a deceased brother. The scope had to be freed from an overgrown small observatory in rural Mercer, Maine. Club Members **Forrest Sumner** and **Rob Burgess** retrieved the scope; Forrest refurbished the mount and the scope sat idle in his garage for years as the club explored the possibility of a permanent observatory where the scope might be used. With that goal seemingly out of reach the decision was made to sell the scope. Rob negotiated the sale via Cloudy Nights and he and club member **Kirk Rogers** delivered the scope to our NY buyer in Portsmouth, NH in mid-December. The \$1,300 sale price was deposited to the club treasury. Earlier in the year Club Member **Ron Thompson** sold another telescope donated to the club for \$450 that went to the club treasury. **Bob Dodge** also handled the donation of a beautiful Meade, computerized 5" EXT telescope, in a custom designed carrying case and eyepieces in a similar case. The scope will be put into the club lending program, or sold, with cash going into the club treasury. These funds strengthen the club and give us the opportunity to upgrade and better outfit our equipment.
- Club Directors created a new **Fundraising Subcommittee** of the Finance Committee consisting of **Bob Dodge, Russ Pinizzotto** and **Rob Burgess** to look at the longer term financial needs of club. The Committee has focused on three areas: financing equipment needs; seeking general capacity building support; and building an endowment. The Subcommittee's first formal action was to submit a proposal to the Bangor Savings Bank Foundation to enable the purchase of equipment for "electronically-assisted astronomy" – to allow the club to resume star parties and show near real-time images of deep sky objects to assembled guests, outside, projected onto a large screen, all the while observing COVID protocols. While club members provide laser-pointer tours of constellations and asterisms, guests could also experience detailed images of objects in those constellations. Images obtained could be simultaneously delivered to remote participants over the internet. The club was informed on 2/5/21 that its \$5,000 request was funded! Work will now proceed to acquire the equipment and develop a compatible star party outline.
- Club Director **Rowan Goebel-Bain** was admitted early decision to Dartmouth College where he intends to pursue physics and astronomy. Go Rowan!

Finally, this Annual Report is dedicated to two departing Board members: **Kirk Rogers** and **Ron Thompson**. **Kirk**, an original founder of the Club, has been an active and enthusiastic participant in club outreach including star parties, Space Day, trips to NEAF and other such activities. A committed and self-taught astrophotographer, Kirk has produced many stunning images over the years, and pursued the hobby in the transition from film to digital, adapting as he went. Kirk has hauled his equipment from Maine to the Winter Star Party in the Florida Keys to New Mexico Skies in Mayville, NM, to Cherry Springs State Park in Pennsylvania's Poconos, capturing photons in each place and producing amazing

images. Kirk's favorite experiences have been sleeping in a tent, next to his scope, being dog tired from all-night imaging but excited to get up and do it again the next night! One of Kirk images of a star party gathering was selected by the State of Pennsylvania to adorn its specialty license plate promoting the Cherry Springs dark sky park. Always affable and quick to lend a hand to any project of the club or a member, Kirk will be missed on the board. While his interest has turned more to photographing birds, Kirk will still be a vital member of the club. Thank you, Kirk, for all you have done for your club over the last 17 years.

Ron Thompson, who is retiring from the Board after 15 years as a loyal, honest, committed and selfless director and Treasurer. Ron performed so many tasks, quietly and behind the scenes that it was only when his decision to retire was announced and we had to start reassigning duties that we realized the full extent of all the things Ron did for the Club. There is no question that without Ron's dedication this club either would have come apart or we would have had to enlist a small legion of extra workers to pick up the load! Last year, unbeknownst to Ron, the Club nominated him for the Astronomical Society of the Pacific's Las Cumbres Amateur Outreach Award. The ASP manages NASA's Night Sky Network. Las Cumbres means "summit," "peak" or "apex" which certainly describes what Ron has done for the club and for amateur astronomy in our part of the state. In addition to being a regular presenter in the Cape Elizabeth schools, an organizer for countless star parties including as club liaison to LL Bean, Ron has been a tireless volunteer for Cornerstones of Science on behalf of SMA with their STAR program ("Sharing Telescopes and Resources"), putting in over 2,000 volunteer hours since the inception of the program in 2012. Unfortunately, ASP rescheduled the award to be a biennial award so that we were encouraged to resubmit it in 2021. Unfortunately again, because of COVID, ASP has delayed this award to 2022. Rest assured, we will resubmit it! Regardless of that and regardless of outcome, Ron is an award winner in our eyes! Fortunately, Ron is not going away, just giving up some hats. We will still have his good humor, affability and knowledge to enrich our Club. Thank you, Ron, for all you have done for your club!

Robert Burgess
President, SMA