

The Year in IT, Spring 2018

Background

The Information Technology Department for the Botanical Society of America is responsible for supporting the mission of the BSA and the needs of the staff in pursuit of that mission. Tasks include writing/updating custom applications such as Botany Conference abstract management system, managing/configuring/customizing 3rd party applications like CiviCRM (membership management), and to some degree supporting commercial applications like eTouches (registration management), Doubledutch (our meeting meeting app) and desktop apps like Adobe Microsoft Office. Hands-on, local support for low level tasks like network configuration, security and staff computer troubleshooting and support are handled by BrightSource IT out of St. Louis.

The department attempts to execute these tasks with a staff of one, plus occasional contract work by a variety of contractors, including Toby Lounsbury who at one time was a member of the department. Contract work is very expensive though, and we attempt to use it only when it makes sense such as instances where a contractor would be able to complete the job much faster than I would be able to, and with little need for me to closely oversee the work as it progresses.

In addition, all of the above may apply as well to the other societies we support, such as SSE, SEB, AFS and ASPT, depending on what commitments we've made to them.

With so many projects and tasks, my work is managed according to an IT Calendar with items scheduled and prioritized according to what needs to be done when according to hard deadlines. Empty spaces in the calendar get filled with items with soft deadlines.

Accomplishments

The most important task the IT Department has is routine and not particularly interesting for this report, but cannot be overlooked because of the amount of time it takes: supporting recurring events such as Botany Conference, membership renewal season, award submission and evaluation, Planting Science, Life Discovery, and the various other web sites we support and maintain. But beyond these, of particular note over the last year we have:

- Responsive design theme for the SEB web site. This theme is based on work originally done by Toby for the current "home" site for Botany Conference. It has shortcomings, and I expect it will have to be redesigned soon.

- Server migration to Ubuntu 16. Web servers have operating systems just like any other computer, and from time to time they need to be upgraded. Support for our previous servers ended in the Fall of 2017, so these were/are due to be upgraded. All of our servers are on the Amazon cloud, so I created a generic “image” of a new server with all the software needed on it, so that we could use that image to create as many new servers as needed whenever they are needed. With this image, the process is to launch a new server, install the operating system, move our data from the old server to the new server, test it, make the new server “live”, and then retire the old server. This has been done for the BSA and SSE servers. The SEB and ASPT servers remain to be done.
- Responsive design theme for SSE web site. The SSE paid a design company (\$400) to create a responsive design for their web site, and I applied the design to the content management system with really good results. Everyone is really happy with it, and SSE agreed to “open source” the results so that others could use it. I count this as a big win and one that we plan to apply to a redesign of the BSA web site. <http://evolutionsociety.org>
- CiviCON Sprint. The membership management application we use, CiviCRM, has an annual conference followed by a “coding sprint” in which developers gather for about a week to work on special projects. I had two projects: evaluate integrating CiviCRM directly into our content management system, and evaluate creating a sophisticated membership directory. The results were that integrating CiviCRM directly into our CMS is a big challenge and there are probably easier ways of indirectly integrating them, and that a sophisticated membership directory is definitely doable. We might want to contract out this project and recruit other organizations who use CiviCRM to help finance it.
- Upgrade CiviCRM to version 4.7. This was not a simple upgrade because many of the customizations we use needed to be updated.
- Add secure URLs (https) to our main web sites. In the past year, both Google Chrome and Mozilla Firefox browsers added a feature that displayed the security status of any page that displayed a form. Including any account login page. Not wanting BSA sites to appear as “insecure”, I added server software that would manage the issuance and maintenance of SSL certificates automatically.
- Migration of SSE membership management to CiviCRM. This is the largest single project I worked on all year, and it was accomplished successfully. SSE says they are very happy with it. I was a major learning opportunity for me, as Toby had done the previous migration for the BSA and thus he knew the most about how CiviCRM worked. I had to go through the same process and now am up to speed on it. This knowledge is very useful as we still have to do the same migration for SEB and AFS.
- Improvement of the society awards system, used by BSA and SSE. This system was substantially a product of 2016, but improvements were added this year.

The Way Forward

Since January, a new challenge has emerged. It is a data privacy/transparency regulation in the European Union called General Data Protection Regulation (GDPR). At this time, we still haven't resolved what we need to do to comply with it, or if we can escape complying with it at all. See my separate summary of issues on the GDPR. The following paragraphs do not take GDPR into account.

In the coming year there is a significant list of projects we would like to accomplish. Keeping in mind the highest priority of supporting staff and ongoing recurring events, it is uncertain how many of these can be accomplished.

- Completion of updating botany.org to a complete content management system. This task was about 50% complete when Toby left, and we've been unable to get back to it since then.
- Converting the remaining BSA awards to a new application process
- Migration of SEB and ASPT to the new server image. Those two servers are no longer supported by Ubuntu.
- Migration of SEB and AFS membership management systems to CiviCRM. This is badly needed as the old system is cumbersome to support and is a dead end to continue improving.
- A new version of Botany Conference abstract management system.

This list is very likely longer than what could be accomplished with our present resources. I am hopeful that we will be hiring a new membership manager that is VERY web application savvy, who could take over much of the support I provide for CiviCRM and our content management system. Such a person could provide a great deal of assistance with helping to migrate our old botany.org web site to content management, freeing up my time for other things.