

At the November SCHS meeting, our speaker was Dr. Travis Longcore, who presented a unique and “illuminating” program on ecological effects of nighttime lighting on the plants and animals living in our gardens. He is an Associate Adjunct Professor at the UCLA Institute of the Environment and Sustainability, and has been instrumental in the development of the field of study assessing the effects of light pollution on species and habitats.

Dr. Longcore began his slide show with graphs illustrating the principles of Correlated Color Temperature (CCT) in the light spectrum, and the responses to the daily shifts in CCT found in both animals and plants. For instance, nocturnal plants have different photo-receptors than humans, and require darkness to bloom and attract pollinators. Other plants require darkness to go to “sleep” by closing the petals of their flowers, often providing a warm place for insects to rest overnight. These responses to natural patterns of darkness illustrate the importance of dark nights to plants, their pollinators, and even their predators.

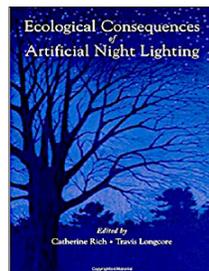
Examples of animals that can experience negative consequences when they “lose the night” include migratory birds which are wildly attracted to bright lights (urban centers, lighthouses) and may come to harm or have their routes disrupted; sea turtles who only lay their eggs in the dark; small mammals that fear light because it makes them vulnerable to predators; and mockingbirds, that are used to singing under a full moon to protect their territory. All of these are susceptible to exhibiting unnatural behaviors when triggered by external light sources at night.

Increases in the use of nocturnal illumination also have unintended impacts on the plant world. Slugs become more active in the light - while some of their predators, like toads, prefer the dark and may decrease their activity; beetles that would normally break down garden debris at night, thereby helping

feed the soil, avoid areas with solar LED lights; and many plants simply cannot bud out if consistently illuminated at night (as in the case of landscape uplights and suburban streetlights).

Dr. Longcore’s recommendations for mitigating these issues and minimizing the adverse affects of unnatural light included: placing lights in the landscape only where they’re needed (to light paths, for safety, etc.); turning lights off when not in use (ex: with motion detectors); directing the light where it is needed and not “flooding” a wider area than necessary, especially onto plants and into the canopies of trees; and use the lowest possible CCT in your lighting (the warmer, the better, preferably in the yellow or orange range). The goal is to use lights in the color spectrum that humans can see, but that do not adversely effect species that are sensitive to higher Kelvin temperatures, which equate to cooler light colors. He then shared some slides illustrating landscape lighting tips from designer Linnea Tillet. Her advice is to go for soft contrasts, where you can distinguish shapes (plants, steps, furniture) without creating glare, and to shield fixtures to prevent light spread. Over-illumination can create very dark shadows, which can lead to other types of problems.

After answering some audience questions, Dr. Longcore indicated that training for landscapers in this area is slight, but that the website of the International Dark Sky Association (www.darksky.org) is currently the best resource for learning more on this fascinating subject. Or you may wish to check out his book, *Ecological Consequences of Artificial Night Lighting*, which provides a scientific basis to begin addressing the challenge of conserving the nighttime environment. it is available through his website at www.travislongcore.net.



✉ Sabine Steinmetz

SCHS ONLINE

The SCHS board has been working at bringing awareness of the organization to a larger audience. Our hope for the coming decade is to build interest, promote attendance at meetings and SCHS events, and increase membership.

Creating a more visible online presence to increase our reach is one of the tools we have been developing over the past months. With the help of member and marketing consultant Erin Castillo, we are now live-streaming our meetings and also promoting them on our Facebook page

www.facebook.com/pg/socalhort/videos/

and on our new YouTube channel

www.youtube.com/channel/UCYYBy88Q361IQVnV69qgmGg

You can link to these pages directly by clicking on the addresses above, or from the home page on our website at:

www.socalhort.com

Additionally, Erin has set up an Instagram profile for SCHS that features information about upcoming speakers, botanical shares from our monthly Plant Forum, local and seasonal horticultural events and opportunities, plus lots of beautiful images from gardens across So Cal. Check it out, “like” and share your favorites, and tag @socalhort to feature your plants on:

www.instagram.com/socalhort

SHARING SECRETS

After not receiving any responses to queries printed in our long-running column for several months, we have decided to retire this feature from the newsletter. (Archived questions and answers can be found on the SCHS website under the sharing Secrets tab.)

For those of you who are still interested in “Sharing Secrets” with other members, you can find questions - new and recycled - posted on the SCHS Instagram page (see link above.)

✉ Sabine Steinmetz

P.S. Look for a new monthly feature in the newsletter, beginning with the January 2020 issue...