

Abstract: Budburst is a community science project that brings together researchers, horticulturists, and community scientists on a shared journey to uncover the stories of plants affected by human impacts on the environment. Budburst tells these stories through data collection, data sharing, education, and personal connections. Budburst community scientists work together to answer specific, timely, and critical ecological research questions by making careful observations of the timing of plant life cycle events, also called phenophases. These observations are used to better understand how plant species and ecosystems respond to changes in climate locally, regionally, and nationally.

Budburst community scientists have been collecting phenological data on plants across North America since 2007. We have also begun collecting data on plant-animal interactions, expanding our observations to include plants and their pollinators. More recently, Budburst has designed shorter-term projects to address focused ecological questions. We are currently exploring pollinator preference for native and cultivated varieties of natives with our nativar project. Our milkweeds and monarchs project investigates whether monarch butterflies preferentially lay eggs on milkweed stems with or without flowers.

Budburst serves as a community science project that learners of all ages and experience levels can participate in and learn from and we strive to make our work accessible and engaging to all. With Budburst, participants can submit real data on any plant from any location. To make our project more adaptable, we recently launched a mobile application for quick and accurate data submission. This increased usability allows for an easier data submission process and will ideally increase participation in the project. Additionally, we are translating our website, mobile app, and all educational content into Spanish in an effort to engage a more diverse population than has been traditionally served by community science programs. With the mobile application and translation work, we hope to reach a broader audience and connect new communities with nature through Budburst.



Emma Oschrin, Ph.D. Budburst Director Chicago Botanical Garden

Emma Oschrin received her Ph.D. in Evolution, Ecology, and Behavior from Indiana University where she studied plant community ecology. Her research focused on how co-occurring invasive plant species interact with each other and how they impact native prairie communities. She has also worked in the conservation non-profit sector, at the Mono Lake Committee in eastern California, where she gained an appreciation for interpretive science

education. As Budburst Director, she helps people engage with the nature in their communities and works to turn community scientists' contribution to research into meaningful conservation action. Throughout her educational and work experience, she developed a passion for effective science communication and believes that connecting to the plants all around us can serve as a gateway to broader environmental activism.

