

'Citizen science' is a relatively new term for the well established tradition of involvement of people who may have no formal scientific training in investigative projects. Naturalists and enthusiastic volunteers have undertaken field work and monitoring of orchid populations for many decades, sometimes in association with scientists and herbaria or tertiary research institutions. They have made key contributions such as the discovery of new taxa, extension of distribution of species, and changes to distributions over time. A recent trend is to engage groups of citizens in monitoring selected orchid populations as part of conservation programs, some of which have funding. In this issue, Andrew Brown explains the Western Australian Adopt an Orchid Project (ADORP), presenting some striking orchids as illustrations.

There are a number of requirements to ensure successful outcomes for citizen science initiatives. These include a well planned, feasible program, supervision by appropriate scientists, and education of volunteers in the tasks required. There must be a continuity in approach and standards over the life of the project. Recognition of terrestrial orchid taxa can be difficult for scientists, more so for less experienced people due to the complexity of subtle variations, and of natural hybrids, some still not identified. Consistent accurate identification is a big challenge. Volunteers are a necessity in conservation projects due to a low level of funding, and it is hoped that this strategy will produce results and be cost effective.

*The Orchadian* publishes articles on orchid hybrid breeding which indicate the percentage composition for particular registered hybrids, based on the known parents in the background. Geneticists may take issue with this approach as it can imply that the appearance of hybrids is predictable from percentage composition. Most breeders and growers know this is not necessarily the case. In making hybrids, there are observable influences of some species but a wide range of variation in progeny. We publish the percentages with an explanation that percentages cannot predict phenotypic (appearance) outcomes. Species may influence the results of hybridisation differently depending on a number of factors,

including what other species have been used, and the stage in the background of breeding when the species is introduced. Many genes are involved in a complex way to produce the form of the plant and flower. There are no key markers for Australian dendrobiums and *Sarcochilus* that can be used for planning and reviewing results, so in general terms, the influence of particular species, and the theoretical species percentage composition are the only indicators that can be used. Past experience and results with different crossings remain the main tools of the hybridist.

*Dendrobium bifalce* is the only member of *Dendrobium* section *Latouria* in Australia. Although the flowers may be considered small in relation to the size of the plant, the stripes and floral features have a significant influence on hybrids, as Pam Porteous from Queensland writes in her account in this issue. Peter Tonelli, the Honorary Warden of the Henry Somerset Conservation Area, describes the establishment of this reserve in northern Tasmania, and offers details of some of the more than 60 species of terrestrial orchids that occur there. The reserve is the first example of its kind in Tasmania, an example of a special area conserved for the long term, and there are several others scattered in different regions of the state.

The ANOS website databases and list of registered Australian orchid hybrids as described by the ANOS Melbourne Suburbs IT Group is a notable achievement for ANOS. Keith Riseley and his team have developed a hybrid list that can be continuously updated and printed as a hard copy at any time, avoiding the problem of outdated hybrid book lists.

Noel Grundon provides a report on *Habenaria propinquior* and David Butler gives an account of successful Australian dendrobium hybrids with excellent photographs. There are also some 2017 Show Reports, recent awards and a report from the National Judging Registrar, Dave Groffen.

*Peter Adams*