Volunteer surveys for York sun orchid – *Thelymitra yorkensis*

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York sun orchid is one of 110 species in the genus *Thelymitra* found in Australia with 37 of these endemic to southwest Western Australia. Unlike most orchids members of the genus lack a modified lip (labellum) and hence have an arrangement of similarly-shaped petals and sepals. The column (fused anthers and stigma) is highly modified and often adorned with wings and glands. All species open widely when it is warm and sunny and close when it is cool and cloudy, hence the common name sun orchid.

Sun orchids are divided into several groups of related species with York sun orchid one of seven species in the *Thelymitra fuscolutea* group. Members of this group are characterised by their yellow to red brown flowers (with or without blotches) and their broad flattened leaves which are often found in small clumps.

York sun orchid is an uncommon species first discovered in 1991 by Les Robson. At the time it was mistaken for the related *Thelymitra dedmaniarum* but is now recognised as a different species. Each plant produces 2-8 large, cinnamon scented flowers which open freely in warm weather. Flower colour is typically orange to dark brown, with a distinctive broad yellow stripe on each petal and sepal. The scientific name *yorkensis* elludes to its geographic distribution.

Flowering between November and early December the species is found over a relatively small area south-west of York, approximately 95 km east of Perth, inhabiting granite or free-draining lateritic soils in wandoo woodland.

Prior to the start of ADORP, a total of twenty sites were listed in the Department of Environment and Conservation (now the Department of Parks and Wildlife) records. Details of these locations were derived from a variety of sources and a review of the data showed that in six cases the same location was listed twice and in one case the directions differed from the latitude and longitude by nearly 10 km. This left a total of fifteen possible locations.

In 2011, we searched eight sites and found a single plant at one site and 15 plants at another. Prescribed burning prevented most of the other sites from being surveyed. Further surveys were carried out in 2012 on three of the previously unchecked sites and one plant was found. The two sites where plants were found the previous year were also revisited with more plants found. In total, after six person-days of searching, the presence of York sun orchid has only been confirmed at three locations, and the highest number of plants seen in the two years we have been doing surveys has been 37, with 31 of these being at one site.

Whilst work to date confirms that York sun orchid is rare and warrants its priority status, there are areas of potentially suitable habitat which have not yet been searched. It is hoped that future surveys in years of better rainfall will identify further populations and that more monitoring can be undertaken of the known populations.