



Viv Holly

Thelymitra spiralis

Pink spotted form from East of Katanning, Western Australia



Ron Heberle

Thelymitra (spiralis x variegata)

Probable natural hybrid from 17km East of Albany, Western Australia

Thelymitra spiralis (Lindl) F.Muell - "Curly Locks"

Ronald L. Heberle
78 Campbell Road, Albany WA 6330

This unique species has the rare distinction where both the species and common name are beautifully descriptive making positive identification a matter of course. This paper has been written to cover some of the complexity of the species, *Thelymitra spiralis*.

This species, closely related to *T. variegata*, *T. apiculata* and *T. matthewsii* with the spirally twisted "corkscrew like" narrow leaf was originally named by Lindley (1839) as *Macdonaldia spiralis*. This was from a collection by James Drummond, colonial botanist at the Swan River Colony (as Western Australia was known at that time).

Mueller (1865) changed the generic name and included it under *Thelymitra*. Nicholls (1949) subsequently named four varieties of *T. spiralis*: var. *pulchella*, var. *punctata*, var. *pallida* var. *scoulerae*. The former, *T. spiralis* var. *pulchella*, was the only one to survive the revision by Clements (1989).

So after a somewhat fragmented taxonomic history we have just two valid taxa *T. spiralis* var. *spiralis* and *T. spiralis* var. *pulchella*. The latter was a collection by Rica Erickson from Bolgart, north of Perth. This lady is a renowned botanical artist and writer of books and papers, possibly her greatest success was the publication of *Orchids of the West*, a former benchmark and now a collector's item. She was also responsible for the perceptive name "Curly Locks".

The species complex is widely distributed over a vast area as shown by Hoffman & Brown (1992) with disjunct populations in the Kalbarri - Murchison River area in the north and a very significant coverage from south of Perth arcing up into the central wheat belt then south easterly to between Esperance and Israelite Bay embracing all the south west corner of the State. These authors in their summary suggested that the species had a confused history, is widespread with a sporadic distribution. I agree with most of this, however, in my experience in the Albany - Great Southern and the eastern wheat belt the species can be quite numerous "in the right year".

Broadly there are two distinct groups within the inland and coastal populations. The southern forms extending from the coast to

approximately 100kms inland have small flowers predominantly all shades of blue; some are bi-coloured with speckling and blotching of a different colour. The typical narrow corkscrew like leaf is conspicuous. Conversely the crest at the back of the column base is very hard to see. They have a preferred environment and grow along watersheds and seepage areas around swamps, lakes and rivers, and have a preference for black sandy soil in open forest country with a tolerance for sedges and rushes where they often choose to grow. This group appears to have adapted to climatic conditions prevailing during the July-August flowering season and are able to expand their segments with ambient temperatures of 17-20°C under favourable conditions. Cloud cover and inclement weather can retard or inhibit flowers opening, as these self-pollinating species will pollinate in the bud and never open.

The inland forms have larger flowers, a greater range of colour, mostly all shades of pink with speckling and blotching similar to the coastal forms. Leaves can be corkscrew or have a wide spiral of two or three with some nearly straight, they do not appear to be self pollinating and have a preferred habitat of sand or loamy soil in open forest country and thrive in flat country and depressions that have dried out after winter rains, they also can be found in environments similar to coastal forms around the perimeter of granite rocks. They flower in August-September at 20-30°C and have long lasting flowers depending on climatic conditions.

Pollen can be mealy or cohesive with a group close to the Albany town site having a radical departure where pollen is exuded in a viscous semi-liquid mass and covers the large stigmatic plate, after some 30 minutes this has shrunk and dried now ringing the outer edge of the stigma in a hard biscuit-like deposit with a few wisps extant.

This strong colony is flowering on fragmented sheets of ironstone (laterite) that once supported a Jarrah Casuarina forest, the area

was bulldozed to establish a gravel pit, this was later aborted. *T. spiralis* has colonised the area with tuberoids growing in cracks and indents in the ironstone covered by a thin layer of soil and moss. I have not seen this phenomenon elsewhere.

Vegetative reproduction is most likely caused by

References

- Clements M.A. (1989) *Australian Orchid Research* Vol 1. (pp. 142-143)
- Erickson R. (1951) *Orchids of the West* (pp. 19-24)
- Heberle R.L. (1991) "*Theiymitra*, The Sun Orchids of Western Australia" *Proceedings 12th Australian Orchid Conference, Perth 1991*
- Heberle R.L. (1999) *Theiymitra variegata* – "The Queen of Sheba" *Orchadian* 13 (2) 73-77.
- Hoffman A.N. and Brown A. (1982) *Orchids of South-West Australia* (p. 253)
- Nicholls W.H. (1969) *Orchids Of Australia* (pp. 46-47)

seeds falling straight down and germinating around the parent plant. I have cultured the species and have seen no sign of tuber multiplication. The species cultures fairly easily and will persist in a pot for up to five years. The southern coastal species self-pollination and short-lived flowers offer little potential.

