

A Guide to the Thelymitras of Rubicon Sanctuary

CNFN draft, July 2021

Phil Collier and Robin Garnett

Photos: Phil Collier

Brief Introduction

We were fortunate to live at Rubicon Sanctuary from 2008 until 2018. It meant that we were right there on the few warm, still days in late October to early December when the flowers of the *Thelymitra* species opened and revealed their identity. We returned in the Spring of 2019 for an 11th year of monitoring. The photos and data presented here are from the period 2008 to 2019.

The dates recorded for “Flowering” are the dates on which a single, mature flower was observed and measured. This was often the first flower to open on the flower spike. The bold date is the median date of the recorded flowering and the date range covers 90% of the recorded flowering. Flowering is also highly dependent on recent disturbance; in the absence of disturbance there is unlikely to be much flowering seen at all.

The “Recognition” list alerts people to helpful characters for identification.

The “Path through identification key” takes observers sequentially through the accompanying key.

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Thelymitra species

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Thelymitra flexuosa
twisted sun-orchid

Flowering: 22 Oct - 27 Oct - 1 Nov (n=27)



Thelymitra flexuosa twisted sun-orchid



Recognition

- flower and plant small
- column lobes short
- large, yellow, fleshy anther
- stem flexuose
- opens readily

Path through identification key

- 1a. Flowers lacking any suggestion of blue
- 2a. Flowers cream or pale yellow

Thelymitra rubra
pink sun-orchid

Flowering: 17 Oct - **25 Oct** - 27 Oct (n=10)



Thelymitra rubra
pink sun-orchid



Recognition

- flowers medium size
- column has short hooded mid-lobe
- lateral lobes have short blunt teeth
- flower stem purple and \pm flexuose
- habitat: dry-damp sandy woodland
- opens readily

Path through identification key

- 1a. Flowers lacking any suggestion of blue
- 2b. Flowers pink
- 3a. Flower stem typically purple and flexuose; lateral lobes of column with short blunt teeth

Thelymitra carnea
tiny sun-orchid

Flowering: 22 Oct - **27 Oct** - 2 Nov (n=51)



Thelymitra carnea
tiny sun-orchid



Recognition

- flower and plant small
- lateral lobes smooth or with fine serrations
- flower stem green and \pm straight
- habitat: sedgy heathland
- opens on warm days

Path through identification key

- 1a. Flowers lacking any suggestion of blue
- 2b. Flowers pink
- 3b. Flower stem typically green and \pm straight; lateral lobes of column with few rounded serrations or smooth

Thelymitra mucida
plum sun orchid

Flowering: 6 Nov - **11 Nov** - 19 Nov (n=37)



Thelymitra mucida

plum sun orchid



Recognition

- flower and plant small
- column hood has sugary coating
- mid-lobe deeply divided
- lateral lobes have shaggy yellow hairs
- leaves small linear, yellow-green
- habitat: sedgy heathland
- opens on warm days

Path through identification key

- 1b. Flowers blue, purple, or occasionally pink
- 4a. Mid lobe of column curving forward and sometimes forming a hood with a \pm smooth rim. Lateral lobes of column hairy.

T. pauciflora GROUP

- 1a. Hairs on lateral lobes of column usually yellow. Mid-lobe of column covered with a glistening (sugar-like) bloom which is easily rubbed off.

Thelymitra holmsii
bluestar sun orchid

Flowering: 11 Nov - **18 Nov** - 28 Nov (n=194)



Thelymitra holmsii

bluestar sun orchid



Recognition

- flower medium
- column has yellow apex, shiny black band below, sometimes deeply divided
- column hairs shaggy cream or white
- buds purplish, leaves narrow
- habitat: wettest sedgy heathland

Path through identification key

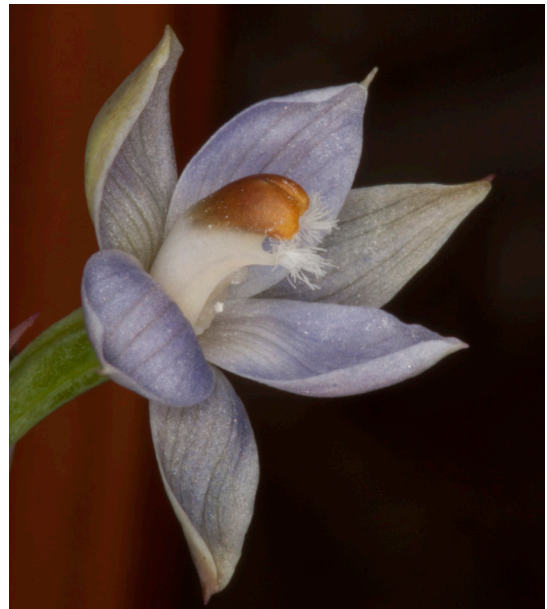
- 1b. Flowers blue, purple, or occasionally pink
- 4a. Mid lobe of column curving forward and sometimes forming a hood with a \pm smooth rim. Lateral lobes of column hairy.

T. pauciflora GROUP

- 1b. Mid-lobe of column glabrous and often shiny
- 2a. Hairs on lateral lobes of column relatively long, shaggy and often cream. Flowers often deep purple.

Thelymitra brevifolia shortleaf sun-orchid

Flowering: 23 Oct - 1 Nov - 9 Nov (n=46)



Thelymitra brevifolia shortleaf sun-orchid



Recognition

- flowers small
- column with orange-brown band
- leaf thin, broad and ± reddish
- buds pale and strongly pointed
- habitat: dry to damp woodland
- flowers open very rarely

Path through identification key

- 1b. Flowers blue
- 4a. Mid lobe of column curving forward and sometimes forming a hood with a ± smooth rim. Lateral lobes of column hairy.

T. pauciflora GROUP

- 1b. Mid-lobe of column glabrous and often shiny
- 2b. Hairs on lateral lobes of column dense, ± straight
- 3a. Leaf blade reddish at least on the margin. Flower pale blue with orange-brown hues on the column, rarely opening.

Thelymitra pauciflora
slender sun-orchid

Flowering: 22 Oct - **29 Oct** - 9 Nov (n=9)



Thelymitra pauciflora

slender sun-orchid



Recognition

- flowers small
- column with mid-brown and speckled band
- column hairs tufted
- no more than 5, well-spaced flowers
- relatively blunt bud
- habitat: damp woodland to sedgy heath

Path through identification key

- 1b. Flowers blue
- 4a. Mid lobe of column curving forward and sometimes forming a hood with a \pm smooth rim

T. pauciflora GROUP

- 1b. Mid-lobe of column glabrous and often shiny
- 2b. Hairs on lateral lobes of column dense
- 3b. Leaf green, sometimes purple the base
- 4a. Mid-lobe of column with a zone of medium brown speckled or freckled with yellow. No more than 5 flowers even in robust specimens.

Thelymitra arenaria
forest sun-orchid

Flowering: 19 Oct - 26 Oct - 28 Oct (n=24)



Thelymitra arenaria

forest sun-orchid



Recognition

- plant slender to tall and robust
- flower medium
- column mid-lobe with \pm round opening
- lateral lobes have dense hairs extending along the upper side
- habitat: mostly sandy woodland
- opens readily

Path through identification key

1b. Flowers blue; 4a. Lateral lobes of column hairy

T. pauciflora GROUP

1b. Mid-lobe of column glabrous and often shiny

2b. Hairs on lateral lobes of column dense

3b. Leaf green, sometimes purple the base

4b. Mid-lobe of column with plain dark band

5a. Hairs on lateral lobes forming a toothbrush

T. arenaria AND *T. exigua*

1a. Sterile bracts usually 2, flowers >20mm diameter, mid-lobe of column with \pm round opening

Thelymitra exigua
short sun-orchid

Flowering: 19 Oct - **30 Oct** - 19 Nov (n=36)



Thelymitra exigua

short sun-orchid



Recognition

- plants mostly small, sometimes up to 10 flowers, one sterile bract
- flowers small
- column mid-lobe variable; may terminate with a slit
- lateral lobes have dense hairs extending along the upper side
- habitat: mostly woodland

Path through identification key

- 1b. Flowers blue; 4a. Lateral lobes of column hairy
***T. pauciflora* GROUP**
- 1b. Mid-lobe of column glabrous and often shiny
- 2b. Hairs on lateral lobes of column dense
- 3b. Leaf green, sometimes purple the base
- 4b. Mid-lobe of column with plain dark band
- 5a. Hairs on lateral lobes forming a toothbrush
T. arenaria* AND *T. exigua
- 1b. Sterile bracts usually 1, flowers <20mm diameter, mid-lobe of column with a variety of openings

Thelymitra “peniculata green” freckled sun-orchid

Flowering: 7 Nov - 16 Nov - 28 Nov (n=43)



Thelymitra “peniculata green” freckled sun-orchid



Recognition

- whole plant is pale green
- flowers small frackled pale blue
- pale yellow column
- habitat: damp woodland to seasonally flooded sedgy heathland

Path through identification key

1b. Flowers blue; 4a. Lateral lobes of column hairy

T. pauciflora GROUP

1b. Mid-lobe of column glabrous and often shiny

2b. Hairs on lateral lobes of column dense

3b. Leaf green, sometimes purple the base

4b. Mid-lobe of column with plain dark band

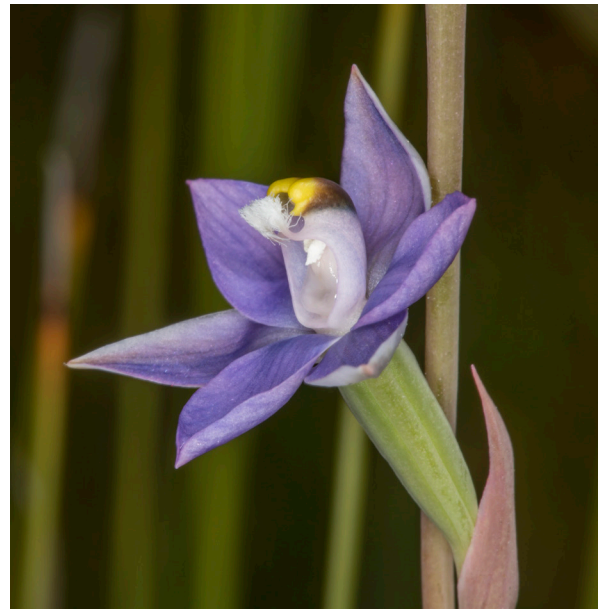
5b. Hairs on lateral lobes forming a mop

T. peniculata AND *T. viridis*

1a. Tepals with very pale blue freckles. All other parts of the plant very pale green.

Thelymitra viridis
green sun-orchid

Flowering: 25 Oct - 2 Nov - 12 Nov (n=55)



Thelymitra viridis green sun-orchid



Recognition

- whole plant is mostly green
- flower small
- column ends in inverted wide V
- multiple flowers can be open together
- leaf pale-green, fleshy, linear
- habitat: sedgey heathland

Path through identification key

1b. Flowers blue; 4a. Lateral lobes of column hairy

T. pauciflora GROUP

1b. Mid-lobe of column glabrous and often shiny

2b. Hairs on lateral lobes of column dense

3b. Leaf green, sometimes purple the base

4b. Mid-lobe of column with plain dark band

5b. Hairs on lateral lobes forming a mop

T. peniculata AND *T. viridis*

1b. Flowers blue

2a. Column terminating with a shallow V-shape

Thelymitra peniculata
trim sun-orchid

Flowering: 2 Nov - 16 Nov - 4 Dec (n=37)



Thelymitra peniculata

trim sun-orchid



Recognition

- flowers purple-blue to pink,
- flowers opening in sequence
- column mid-lobe with yellow apex that maybe \pm crimped
- leaf dark green/purple
- habitat: sedgy heathland, wetland

Path through identification key

1b. Flowers blue; 4a. Lateral lobes of column hairy

T. pauciflora GROUP

1b. Mid-lobe of column glabrous and often shiny

2b. Hairs on lateral lobes of column dense

3b. Leaf green, sometimes purple the base

4b. Mid-lobe of column with plain dark band

5b. Hairs on lateral lobes forming a mop

T. peniculata AND *T. viridis*

1b. Flowers blue, purple or pink-purple

2b. Column terminating with a narrow V-shape

Thelymitra sparsa
wispy sun-orchid

Flowering: 28 Oct - 6 Nov - 8 Nov (n=10)



Thelymitra sparsa
wispy sun-orchid



Recognition

- flower medium size
- lateral lobes have few to no hairs
- column with disorganised teeth or calli
- habitat: damp woodland

Path through identification key

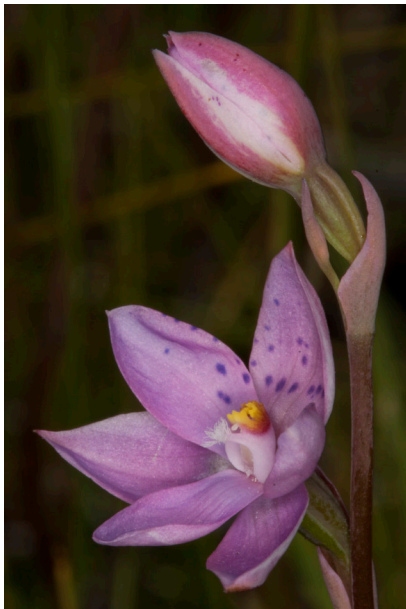
- 1b. Flowers blue
- 4b. Mid-lobe of column truncated and/or with teeth
- 5a. Petals with spots, sometimes very few or faint
- 6a. Mid-lobe of column toothed and/or ornamented

***T. ixioides* GROUP**

- 1b. Lateral lobes of the column with very few or no hairs at the apex. Mid-lobe of column with lobes and/or calli that are often disorganised.

Thelymitra juncifolia
large-spotted sun-orchid

Flowering: 3 Nov - **8 Nov** - 15 Nov (n=30)



Thelymitra juncifolia
large-spotted sun-orchid



Recognition

- flowers medium size
- three column teeth with “Cradle Mountain” profile
- single/few rows of calli on column
- habitat: damp woodland, sedgy heathland
- opens readily

Path through identification key

- 1b. Flowers blue, purple, or occasionally pink
- 4b. Mid-lobe of column truncated and/or with teeth
- 5a. Petals with spots, sometimes very few or faint
- 6a. Mid-lobe of column toothed and/or ornamented

***T. ixioides* GROUP**

- 1a. Lateral lobes of the column with a tuft of hairs at the apex
- 2a. Mid-lobe of column with three teeth of \pm equal height, with dense calli present in few bands

Thelymitra ixioides
spotted sun-orchid

Flowering: 27 Oct - 4 Nov - 23 Nov (n=22)



Thelymitra ixioides spotted sun-orchid



Recognition

- plants may be robust with 6+ flowers
- flowers medium size
- several rows of finger-like calli
- habitat: dry to damp woodland
- opens readily

Path through identification key

- 1b. Flowers blue
 - 4b. Mid-lobe of column truncated and/or with teeth
 - 5a. Petals with spots, sometimes very few or faint
 - 6a. Mid-lobe of column toothed and/or ornamented
- T. ixioides* GROUP**
- 1a. Lateral lobes of the column with a tuft of hairs at the apex
 - 2b. Mid-lobe of column with teeth on each edge, with dense calli in several bands on or close to the apex of the column

Thelymitra polychroma
rainbow sun-orchid

Flowering: 3 Nov - 7 Nov - 15 Nov (n=263)



Thelymitra polychroma

rainbow sun-orchid



Recognition

- flower blue/pinkish blue with spots
- wavy “cave” column opening
- lateral lobes have cream/white, long hairs
- plump buds
- leaf pale green, relatively fleshy
- habitat: sedgy heathland
- opens readily

Path through identification key

- 1b. Flowers blue
- 4b. Mid-lobe of column truncated and/or with teeth
- 5a. Petals with spots, sometimes very few or faint
- 6b. Mid-lobe of column usually not or barely lobed
- 7a. Mid-lobe of column truncated just above the lateral lobes, appearing to form a narrow U- to horseshoe-shaped opening at the apex. The rim is unevenly serrated and/or crimped.

Thelymitra simulata
collared sun-orchid

Flowering: 4 Nov - **11 Nov** - 20 Nov (n=250)



Thelymitra simulata collared sun-orchid



Recognition

- flower blue, spotted
- hood ribbed and brown with narrow yellow margin
- lateral lobes have terminal tuft of white hairs
- glaucous bud
- habitat: sedgy heathland
- opens on warm sunny days

Path through identification key

- 1b. Flowers blue.
- 4b. Mid-lobe of column truncated and/or with teeth
- 5a. Petals with spots, sometimes very few or faint
- 6b. Mid-lobe of column usually not or barely lobed
- 7b. Mid-lobe of column often gently curved and then truncated

T. simulata AND *T. spadicea*

- 1a. Mid-lobe of column obscurely wrinkled on the outside, usually with only a small strip of yellow at the apex

Thelymitra spadicea
(browntop sun-orchid)

Flowering: 8 Nov - **15 Nov** - 20 Nov (n=220)



Thelymitra spadicea
(browntop sun-orchid)



Recognition

- flowers medium spotted
- column mid-lobe smooth, yellow apex
- lateral lobes have terminal tuft of white hairs
- bud shiny
- habitat: damp places
- flowers late-season
- opens on warm sunny days

Path through identification key

- 1b. Flowers blue
- 4b. Mid-lobe of column truncated and/or with teeth
- 5a. Petals with spots, sometimes very few or faint
- 6b. Mid-lobe of column usually not or barely lobed
- 7b. Mid-lobe of column often gently curved and then truncated

T. simulata* AND *T. spadicea

- 1b. Mid-lobe of column smooth on the outside, usually with a broad band of yellow at the apex and variously coloured below

Thelymitra circumsepta
naked sun-orchid

Flowering: 3 Dec - 9 Dec - 14 Dec (n=13)



Thelymitra circumsepta naked sun-orchid



Recognition

- robust tall flower stem
- flowers large
- column mid-lobe short, toothed
- lateral lobes with long yellow hairs
- leaf thick and broad
- habitat: recently burnt, very wet heathland

Path through identification key

- 1b. Flowers blue, purple, or occasionally pink
- 4b. Mid-lobe of column truncated and/or with teeth
- 5b. Petals without spots
- 8a. Lateral lobes of column with hairs
- 9a. Lateral lobes of column with yellow (occasionally grey) hairs. Usually a robust plant flowering in December.

Thelymitra aristata
great sun-orchid

Flowering: 5 Nov - 14 Nov - 20 Nov (n=32)



Thelymitra aristata great sun-orchid



Recognition

- robust plant up to 600 mm tall
- multiple large flowers
- column mid lobe curved with serrated edge
- lateral lobes have tufts of white hairs
- habitat: recently burnt, very wet heathland
- flowers open readily

Path through identification key

- 1b. Flowers blue
- 4b. Mid-lobe of column truncated and/or with teeth
- 5b. Petals sometimes faintly or boldly striped, but without spots
- 8a. Lateral lobes of column with hairs
- 9a. Lateral lobes of column with white hairs
- 10a. Mid lobe of column gently curved and narrowing, rim with small serrations or calli. Usually a robust plant with flowers opening freely.

Thelymitra longiloba
lobed sun-orchid

Flowering: 29 Oct - 9 Nov - 17 Nov (n=30)



Thelymitra longiloba

lobed sun-orchid



Recognition

- lower medium sized
- column with toothed mid-lobe
- lateral lobes with sparse shaggy hairs
- buds long and cigar-shaped
- leaf strongly keeled
- floral bracts stick out from stem
- habitat: sedgy heathland

Path through identification key

- 1b. Flowers blue, purple, or occasionally pink
- 4b. Mid-lobe of column truncated and/or with teeth
- 5b. Petals sometimes faintly or boldly striped, but without spots
- 8a. Lateral lobes of column with hairs
- 9a. Lateral lobes of column with white hairs
- 10b. Mid lobe of column with an elongated tooth on each edge and truncate between. Buds elongated and cigar shaped, floral bracts patent (not appressed), leaf strongly keeled.

Thelymitra cyanea veined sun-orchid

Flowering: 9 Nov - **5 Dec** - 7 Dec (n=29)



Thelymitra cyanea veined sun-orchid



Recognition

- flower large, with darker blue veins
- column lateral lobes curled
- plants in large groups
- leaf fleshy
- fruit capsules striped
- habitat: wet sedgy heathland

Path through identification key

- 1b. Flowers blue
- 4b. Mid-lobe of column truncated and/or with teeth
- 5b. Petals sometimes faintly or boldly striped, but without spots
- 8b. Lateral lobes of column without hairs
- 11a. Flowers boldly (or occasionally faintly) striped.
Lateral arms of column narrow, unlobed, scrolled or twisted.

Thelymitra erosa
striped sun-orchid

Flowering: 3 Nov - 11 Nov - 20 Nov (n=47)



Thelymitra erosa striped sun-orchid



Recognition

- flowers large, sometimes striped
- column lateral lobes have a few teeth but no hairs
- tall, clustered plants
- leaf fleshy, not tapered
- habitat: sedgy heathland
- opens readily

Path through identification key

- 1b. Flowers blue
- 4b. Mid-lobe of column truncated and/or with teeth
- 5b. Petals sometimes faintly or boldly striped, but without spots
- 8b. Lateral lobes of column without hairs
- 11b. Flowers faintly (or occasionally boldly) striped. Lateral lobes of column with a few teeth, flat or gently curved.