

***Sorocephalus* R.Br. 1810**  
**Powderpuffs**

Anything specific to go in here?

Richard Salisbury (1809) published this as *Soranche.*, but Robert Brown's name is conserved. Salisbury's concept of the genus is used today, as Brown included several *Spatalla* within this concept of the genus.

The type is *S. imbricatus*. *Sorocephalus* means "heaped head"

There are three sections in the genus. etc

*Sorocephalus tenuifolius* R.Br. 1810  
**Diminutive Powderpuff**

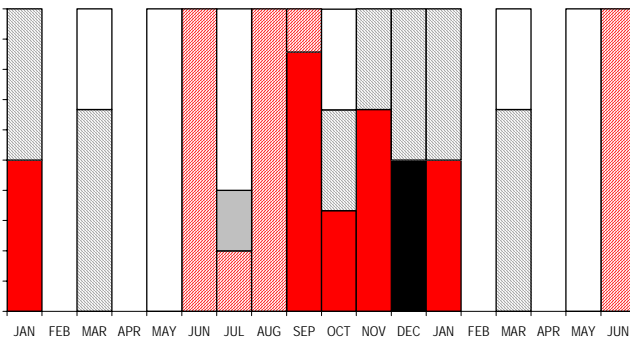
**Other Common Names:** Fine-leaf Soranthe.  
**Other Scientific Names:** *None*.

**31 Records**

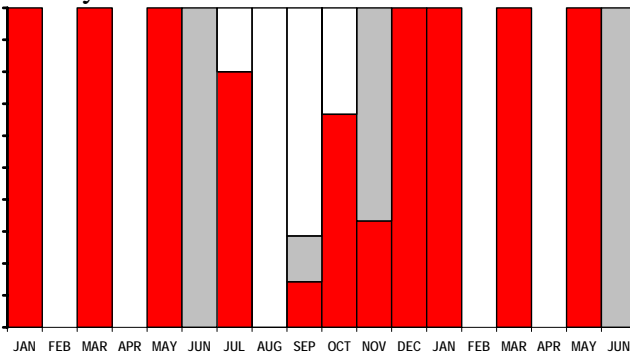
**Population** (31 records): 48% Common, 48% Frequent, 3% Extinct.

**Dispersion** (30 records): 73% variable, 23% clumped, 3% evenly distributed.

**Flowering** (30 records with: Jan 2, Feb 0, Mar 3, Apr 0, May 2, Jun 1, Jul 5, Aug 2, Sep 7, Oct 3, Nov 3, Dec 2): Buds from Jun to Aug; Flowering from Jan and Sep to Nov; Peak Flowering from Dec; Over from Oct to Mar; Fruit from Jul; Nothing from Mar to May and Jul and Oct. Peak levels at 100% in Aug to Sep. Historically recorded as flowering from Jan to Feb.



**Growth** (30 records with: Jan 2, Feb 0, Mar 3, Apr 0, May 2, Jun 1, Jul 5, Aug 2, Sep 7, Oct 3, Nov 3, Dec 2): Much from Oct to May and Jul; Rare from Jun and Nov; None from Jul to Oct 33. Peak levels at 100% from Dec to May.



**Seedlings** (26 records): Absent in 92%: more seedlings than prefire adults in 1 case. Seedlings found in Oct.

**Fire Survival** (1 record): 100% survived by seedlings only.

**Age to first flowering:** First flowers recorded at 2 years <check does not tally with graph>, 50% estimated at 4-5 years, and 100% recorded at 7 years.



**Height** (30 records): 23% 0-0.2 m tall, 77% 0.2-1 m tall.

**Pollinators** (4 records): 75% bees or wasps, 25% beetles.

**Detailed Pollinators** (2 records): Monkey Beetle, Honey Bee.

**Habitat:**

**Distance to Ocean** (29 records): 100% inland - further than 2 km from coast.

**Altitude** (29 records): 100 - 280 m; 180<sub>lq</sub> - 200<sub>med</sub> - 220<sub>uq</sub>m.

**Landform** (29 records): 52% shallow soil, 48% deep soil.

**Slope** (29 records): 59% steep incline, 41% gentle incline.

**Aspect** (29 records): 55% West, 41% North, 2% East, 2% South.

**Soil Type** (29 records): 69% loamy, 14% clayey, 10% sandy, 3% gravelly, 3% rocky.

**Soil Colour** (29 records): 79% grey, 14% brown, 3% white, 3% yellow.

**Geology** (28 records): 57% sandstone, 43% shale.

**Vegetation** (29 records): 97% shrubland, 3% plantations.

**Conservation Status and Threat:**

**Red Data List Status:** Endangered  
 B1a(ii)b(ii,iii,v)c(iv)+2a(ii)b(ii,iii,v)c(iv).

**Occurrence (Fynbos):** 22 km<sup>2</sup> with 50% conserved and 8% lost; **Occupancy:** 20 km<sup>2</sup> with 56% conserved and 14% lost.

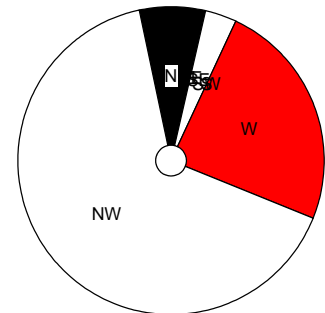
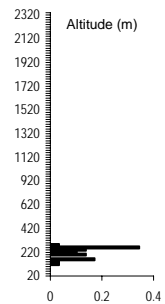
**Fragmentation index:** 91%.

**Nature Reserves** (29 records): 93% in nature reserves - well conserved.

**Habitat destruction** (29 records): 97% extensive natural habitat, 3% islands.

**Alien Invasive Species** (29 records): 76% none, 21% *Pinus*, 3% Fabaceae (chiefly alien *Acacia*).

**Alien Density** (29 records): 76% alien-free, 21% sparse, 3% abundant.



**Cultivation & Utilization:**

**Picking** (30 records): 100% no sign of picking.

**Cultivation Status:** No noted cultivation.

**Atlassers Notes:**

Checked up following information from Emilia Rode and there it was (MAJ96070201); Apple orchard: site of extinct population - ploughed up in the 1980s (ASP92092204).

Approx 18 plants growing on bank of small stream (LYM96092202); About 50 plants in 10m X 10m area (MAJ96070201); 400 - 500 plants (MAJ96070202); About 80 - 100 plants (MAJ96070203); About 600 plants (MAJ96070601);

Grows in sparsely vegetated areas not the typical habitat (MAJ96070203).

**Confusing Species:** None noted.

Records of identification queries = 1

**Variation and Taxonomy:** No variation noted.

Should the correct citation for this species not be *S. tenuifolius* (Salisb. ex. Knight) R.Br?

**Distribution:** Add. Seems to prefer degraded habitat – often occurs on erosion lines where few other plants survive.

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***Sorocephalus alopecurus* Rourke 1969**  
**Woolly-stalk Powderpuff**

**Other Common Names:** None known.  
**Other Scientific Names:** *None*.

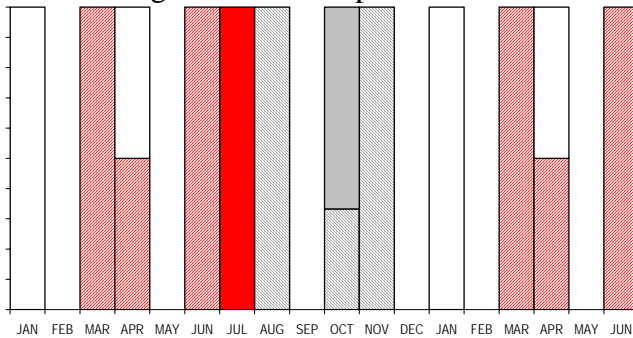
**Altitude** (12 records): 580 - 920 m; 600 *lq* - 640 *med* - 700 *uq*m.

**12 Records**

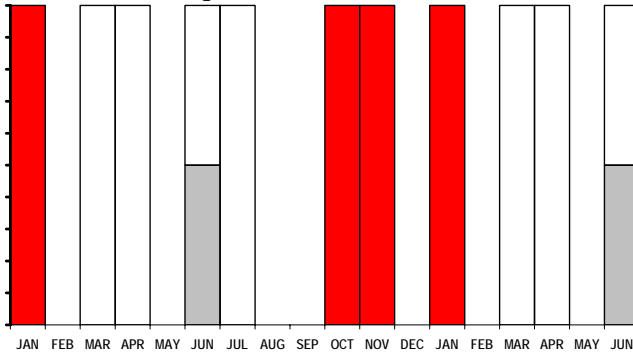
**Population** (12 records): 17% Common, 67% Frequent, 17% Rare.

**Dispersion** (12 records): 92% clumped, 8% variable.

**Flowering** (12 records with: Jan 1, Feb 0, Mar 1, Apr 2, May 0, Jun 2, Jul 1, Aug 1, Sep 0, Oct 3, Nov 1, Dec 0): Buds from Mar to Jun; Flowering from Jul; Peak Flowering not recorded; Over from Aug to Nov; Fruit from Oct; Nothing from Jan and Apr. Peak levels at 100% in Jul. Historically recorded as flowering from Jul to Sep.



**Growth** (11 records with: Jan 1, Feb 0, Mar 1, Apr 2, May 0, Jun 2, Jul 1, Aug 0, Sep 0, Oct 3, Nov 1, Dec 0): Much from Oct to Jan; Rare from Jun; None from Mar to Jul. Peak levels inadequate: at 100% in Oct to Jan.



**Seedlings** (5 records): All without any seedlings present.

**Fire Survival** : No data.

**Age to first flowering:** First flowers recorded at 100% at 6 years.

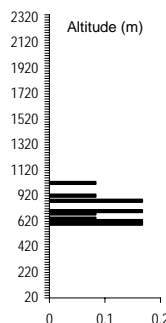
**Height** (12 records): 92% 0.2-1 m tall, 8% 1-2 m tall.

**Pollinators** (1 record): 100% bees or wasps.

**Detailed Pollinators:** No additional data.

**Habitat:**

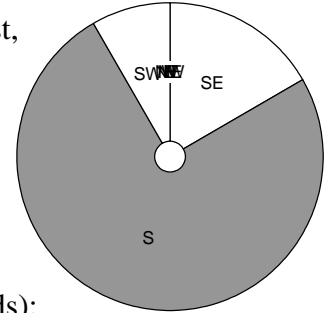
**Distance to Ocean** (12 records): 100% inland - further than 2 km from coast.



**Landform** (12 records): 67% deep soil, 17% rocky outcrops, 17% shallow soil.

**Slope** (12 records): 100% steep incline.

**Aspect** (12 records): 88% South, 8% East, 4% West.



**Soil Type** (12 records): 33% sandy, 25% peaty, 17% gravelly, 17% rocky, 8% loamy.

**Soil Colour** (12 records): 58% grey, 33% black, 8% white.

**Geology** (12 records): 100% sandstone.

**Vegetation** (12 records): 92% shrubland, 8% grassland.

**Conservation Status and Threat:**

**Red Data List Status:** Endangered B1a(ii)c(iv)+2a(ii)c(iv).

**Occurrence (Fynbos):** 18 km<sup>2</sup> with 92% conserved and 0% lost; **Occupancy:** 14 km<sup>2</sup> with 78% conserved and 11% lost. **Fragmentation index:** 78%.

**Nature Reserves** (12 records): 33% in nature reserves.

**Habitat destruction** (12 records): 100% extensive natural habitat.

**Alien Invasive Species** (12 records): 83% *Pinus*, 8% *Hakea*, 8% Fabaceae (chiefly alien *Acacia*).

**Alien Density** (12 records): 92% sparse, 8% abundant.

**Cultivation & Utilization:**

**Picking** (9 records): 100% no sign of picking.

**Cultivation Status:** No noted cultivation.

**Atlassers Notes:**

Flowered extensively for first time this year after fire some 5-7 years ago (SHR93102302);

Heads gnawed off by mice (VAL96103001); About half of plants dead - about 15 in one small clump - signs that plot was a much denser: pine stand cleared one or two fire cycles back (AGRY0072609);

**Confusing Species:** None noted.

Records of identification queries = 1

**Variation and Taxonomy:** No variation noted. Closely related to *S. pinifolius*.

**Distribution:** Add.

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*Sorocephalus clavigerus* (Salisb. ex Kn.) Hutch. 1809, 1912  
**Erect Powderpuff**

**Other Common Names:** Club-bearing Soranthe, Mountain Soranthe, Rock Soranthe.

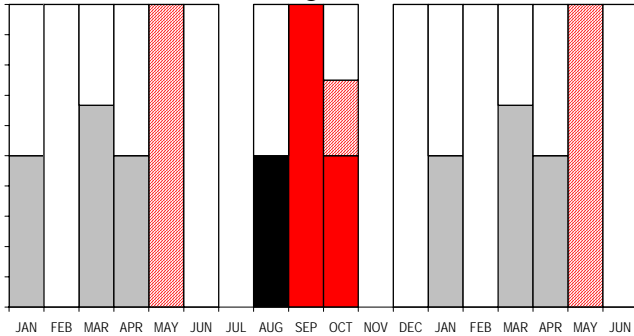
**Other Scientific Names:** *montana* (Salisb. ex Knight) 1809, *rupestris* (Salisb. ex Knight) Phill 1809.

**22 Records**

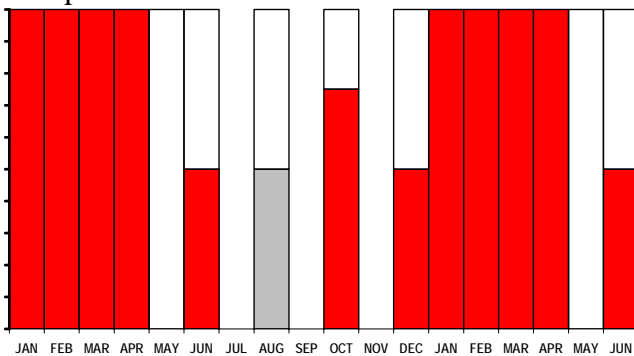
**Population** (22 records): 0% Common, 32% Frequent, 64% Rare, 5% Extinct.

**Dispersion** (16 records): 81% clumped, 19% variable.

**Flowering** (21 records with: Jan 2, Feb 2, Mar 3, Apr 2, May 1, Jun 2, Jul 0, Aug 2, Sep 1, Oct 4, Nov 0, Dec 2): Buds from May and Oct; Flowering from Sep to Oct; Peak Flowering from Aug; Over not recorded; Fruit from Jan and Mar to Apr; Nothing from Jan to Apr and Jun to Aug and Oct to Dec. Peak levels at 100% in Sep. Historically recorded as flowering from Jul to Dec.



**Growth** (20 records with: Jan 2, Feb 2, Mar 3, Apr 2, May 1, Jun 2, Jul 0, Aug 2, Sep 0, Oct 4, Nov 0, Dec 2): Much from Oct to Apr and Jun; Rare from Aug; None from May to Dec. Peak levels inadequate: at 100% in Jan to Apr.



**Seedlings** (12 records): All without any seedlings present.

**Fire Survival** (2 records): 100% survived by seedlings only.

**Age to first flowering:** First flowers recorded at 9 years, 50% estimated at 7-8 years, and 100% recorded at 9 years.



**Height** (21 records): 29% 0-0.2 m tall, 71% 0.2-1 m tall.

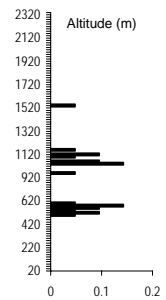
**Pollinators** : No data.

**Detailed Pollinators:** No additional data.

**Habitat:**

**Distance to Ocean** (21 records): 100% inland - further than 2 km from coast.

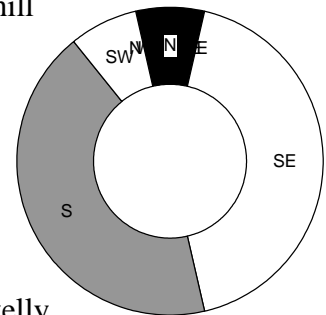
**Altitude** (21 records): 480 - 1440 m; 540<sub>lq</sub> - 580<sub>med</sub> - 860<sub>uq</sub>m.



**Landform** (21 records): 67% deep soil, 33% shallow soil.

**Slope** (21 records): 43% steep incline, 24% gentle incline, 19% platform, 14% hill top.

**Aspect** (14 records): 75% South, 14% East, 7% North, 4% West.



**Soil Type** (21 records): 52% sandy, 33% peaty, 10% loamy, 5% gravelly.

**Soil Colour** (21 records): 67% grey, 29% black, 5% brown.

**Geology** (21 records): 100% sandstone.

**Vegetation** (21 records): 100% shrubland.

**Conservation Status and Threat:**

**Red Data List Status:** Endangered

B1b(i,ii,iii,iv,v)c(iv)+2b(i,ii,iii,iv,v)c(iv), D Occurrence (Fynbos): 265 km<sup>2</sup> with 52% conserved and 25% lost; Occupancy: 23 km<sup>2</sup> with 71% conserved and 0% lost. Fragmentation index: 8%.

**Nature Reserves** (21 records): 100% in nature reserves - well conserved.

**Habitat destruction** (21 records):

100% extensive natural habitat.

**Alien Invasive Species** (21 records): 76% none, 24% *Pinus*.

**Alien Density** (21 records): 76% alien-free, 24% sparse.

**Cultivation & Utilization:**

**Picking** (16 records): 100% no sign of picking.

**Cultivation Status:** No noted cultivation.

**Atlasers Notes:**

Has been atlased as *S. palustris* but is erect not creeping : looks very bushy for *S. clavigerus*

but otherwise ok for this latter species! *S. palustris* still not found! (ASP94102905);  
Grazed on by herbivore (MAJ92060802);  
Four plants were found but all dead and clumped in old veld (NGF98041008);

**Confusing Species:** *S. palustris*: either its description is incorrect or else *S. palustris* is not a creeper.

Records of identification queries = 9.

Records of corrected identification queries = 7.

**Variation and Taxonomy:** Dimensions of flowers (7 to 15 mm) and leaves (12 to 25

mm) tends to be larger from the southern localities. Bract dimensions vary from 1-3 mm wide and 5 to 15 mm long, presumably bigger in the south. Bract pubescence also varies between populations from completely hairy, to only the base hairy to hairless, but showing no recorded geographical trends.

**Distribution:** Add.

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***Sorocephalus crassifolius* Hutch.**  
**Flowerless Powderpuff**

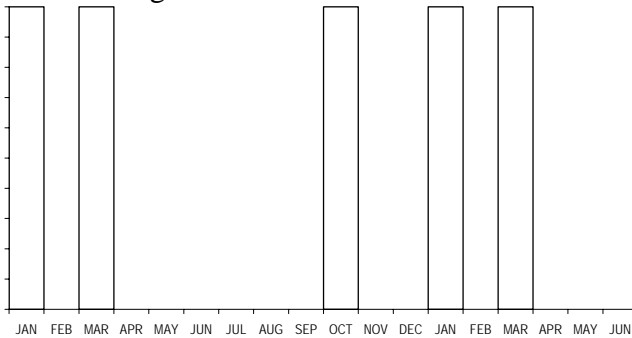
**Other Common Names:** None known.  
**Other Scientific Names:** *None*.

**8 Records**

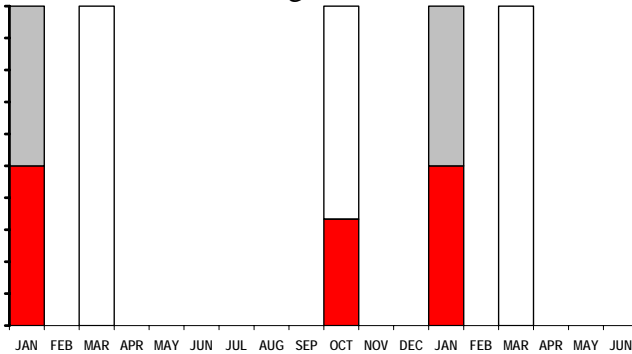
**Population** (8 records): 0% Common, 0% Frequent, 75% Rare, 25% Extinct.

**Dispersion** (4 records): 100% clumped.

**Flowering** (6 records with: Jan 2, Feb 0, Mar 1, Apr 0, May 0, Jun 0, Jul 0, Aug 0, Sep 0, Oct 3, Nov 0, Dec 0): Buds, Flowering, Peak Flowering, Over and Fruit not recorded. Nothing from Jan, Mar and Oct. Peak levels meaningless. Historically recorded as flowering from Dec to Feb.



**Growth** (6 records with: Jan 2, Feb 0, Mar 1, Apr 0, May 0, Jun 0, Jul 0, Aug 0, Sep 0, Oct 3, Nov 0, Dec 0): Much from Jan and Oct; Rare from Jan; None from Mar and Oct. Peak levels meaningless.



**Seedlings** (3 records): All without any seedlings present.

**Fire Survival** : No data.

**Age to first flowering:** Flowering not recorded during the Protea Atlas Project.



**Height** (6 records): 100% 0-0.2 m tall.

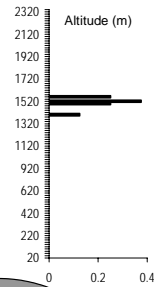
**Pollinators** : No data.

**Detailed Pollinators:** No additional data.

**Habitat:**

**Distance to Ocean** (8 records): 100% inland - further than 2 km from coast.

**Altitude** (8 records): 1280 - 1460 m; 1380<sub>lq</sub> - 1400<sub>med</sub> - 1400<sub>uq</sub>m.



**Landform** (8 records): 100% deep soil.

**Slope** (8 records): 50% steep incline, 38% gentle incline, 13% hill top.

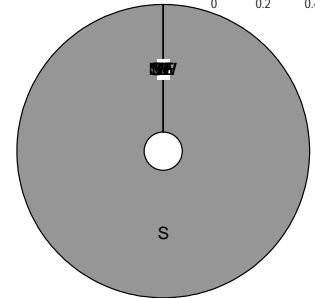
**Aspect** (8 records): 100% South.

**Soil Type** (8 records): 63% peaty, 38% sandy.

**Soil Colour** (8 records): 88% black, 13% grey.

**Geology** (8 records): 100% sandstone.

**Vegetation** (8 records): 100% shrubland.



**Conservation Status and Threat:**  
**Red Data List Status:** Critically Endangered D.

**Occurrence** (Fynbos): 8 km<sup>2</sup> with 96% conserved and 2% lost; **Occupancy:** 9 km<sup>2</sup> with 85% conserved and 3% lost. **Fragmentation index** meaningless.

**Nature Reserves** (8 records): 100% in nature reserves - well conserved.

**Habitat destruction** (8 records): 100% extensive natural habitat.

**Alien Invasive Species** (8 records): 88% *Pinus*, 13% none.

**Alien Density** (8 records): 13% alien-free, 88% sparse.

**Cultivation & Utilization:**

**Picking** (6 records): 100% no sign of picking.  
**Cultivation Status:** No noted cultivation.

**Atlassers Notes:**

None found! Looked! (AGR98022406);  
Some 3 big, 2 medium and 4 small in veld more than 20 year old? (ASP93012022);  
Some 2 adult and 3 small seen (ASP93012028);  
Despite a one hour search at this previously known site of 4-5 plants they could not be located. Could it be that the plants are just unreconizable so soon after the previous fire of 1 year ago? (NGFY1021001);

We did an extensive search of one small area (60sq m) where there had previously been 4 known plants before the fire in 2000. This is a very dificult protea to see and there are probably very few plants - less than 10? (NGFY1032501);

**Confusing Species:** None.

**Variation and Taxonomy:** No variation known.



**Distribution:** Add.

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*Sorocephalus palustris* Rourke  
Mat Powderpuff

**Other Common Names:** None known.  
**Other Scientific Names:** *None*.

**1 Record**

**Population** (1 record): 0% Common,  
0% Frequent, 100% Extinct.

**Dispersion** (0 records).

**Flowering** (0 records). Historically recorded as  
flowering from Feb.

**Growth** (0 records).

**Seedlings:** No data.

**Fire Survival :** No data.

**Age to first flowering:** No data.

**Height** (0 records).

**Pollinators :** No data.

**Detailed Pollinators:** No additional data.

**Habitat:**

**Distance to Ocean** (1 record):  
100% inland - further than 2  
km from coast.

**Altitude** (1 record): 1200 -  
1220 m; 1200<sub>lq</sub> - 1220<sub>med</sub> -  
1220<sub>uq</sub> m.

**Landform** (1 record):

100% deep soil.

**Slope** (1 records): 100% steep  
incline.

**Aspect** (1 record): 50% South, 50% West.

**Soil Type** (1 record): 100% peaty.

**Soil Colour** (1 record): 100% black.

**Geology** (1 record): 100% sandstone.

**Vegetation** (1 record): 100% shrubland.

**Conservation Status and Threat:**

**Red Data List Status:** Extinct.

**Occurrence (Fynbos):** No data – 0 km<sup>2</sup>;

**Occupancy:** 0 km<sup>2</sup>.

**Nature Reserves** (1 record): 100% in nature  
reserves - well conserved.

**Habitat destruction** (1 record):

100% extensive natural habitat.

**Alien Invasive Species** (1 record): 100% none.

**Alien Density** (1 record): 100% alien-free.

**Cultivation & Utilization:**

**Picking:** No data.

**Cultivation Status:** No noted cultivation.

**Atlassers Notes:**

Extensive searching of type locality yielded  
nothing - presumed extinct!  
(AGRY1102405);

**Confusing Species:** *S. palustris* is recorded as  
a decumbent shrub forming mats – no such  
plants were found. Some erect rounded  
bushes were identified on 5 Beacon Ridge as  
this species, but based on available data are  
probably *S. clavigerus*.

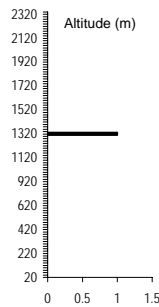
**Variation and Taxonomy:** No variation  
known. At present only known from two  
specimens and photograph.

**Distribution:** Add.

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*Sorocephalus pinifolius* (Salisb. ex Kn.) Rourke 1809, 1969  
**Long-leaf Powderpuff**

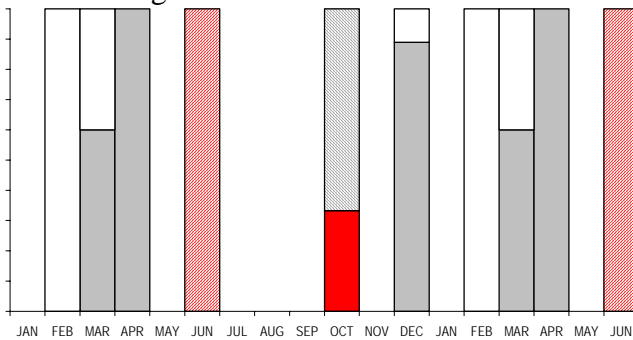
**Other Common Names:** Pine-leaf Soranthe.  
**Other Scientific Names:** *imberbis* RBr 1810,  
*longifolius* (Meisn.) Phil. 1856.

**24 Records**

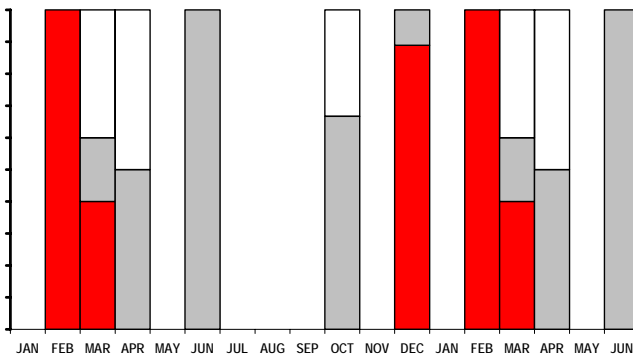
**Population** (24 records): 8% Common,  
 54% Frequent, 33% Rare, 4% Extinct.

**Dispersion** (20 records): 60% clumped,  
 40% variable.

**Flowering** (23 records with: Jan 0, Feb 2, Mar 5, Apr 2, May 0, Jun 2, Jul 0, Aug 0, Sep 0, Oct 3, Nov 0, Dec 9): Buds from Jun; Flowering from Oct; Peak Flowering not noted; Over from Oct; Fruit from Mar to Apr and Dec; Nothing from Feb to Mar. Peak levels meaningless. Historically recorded as flowering from Jun to Oct.



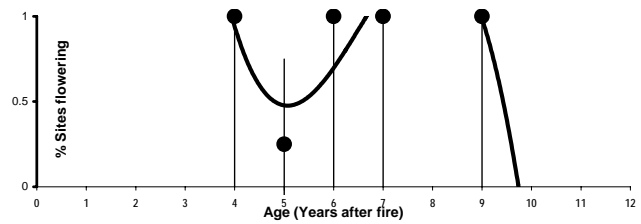
**Growth** (23 records with: Jan 0, Feb 2, Mar 5, Apr 2, May 0, Jun 2, Jul 0, Aug 0, Sep 0, Oct 3, Nov 0, Dec 9): Much from Dec to Mar; Rare from Mar to Jun and Oct; None from Mar to Apr and Oct. Peak levels at 100% in Feb.



**Seedlings** (7 records): All without any seedlings present.

**Fire Survival** : No data.

**Age to first flowering:** First flowers recorded at 4 years, 50% estimated at 4-5 years, and 100% recorded at 4 years.



**Height** (23 records): 100% 0.2-1 m tall.

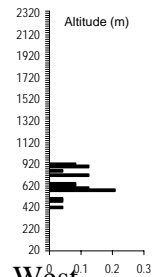
**Pollinators** : No data.

**Detailed Pollinators:** No additional data.

**Habitat:**

**Distance to Ocean** (24 records): 100% inland - further than 2 km from coast.

**Altitude** (24 records): 400 - 820 m;  
 560<sub>lq</sub> - 580<sub>med</sub> - 600<sub>uq</sub> m.



**Landform** (23 records): 74% deep soil, 17% shallow soil, 9% rocky outcrops.

**Slope** (23 records): 48% steep incline, 48% gentle incline, 4% platform.

**Aspect** (23 records): 87% South, 9% West, 4% East.

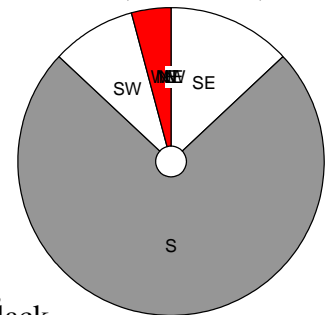
**Soil Type** (23 records):

39% sandy,  
 22% gravelly,  
 17% peaty,  
 13% loamy,  
 9% rocky.

**Soil Colour** (23 records): 61% grey, 26% brown, 13% black.

**Geology** (23 records): 100% sandstone.

**Vegetation** (23 records): 100% shrubland.



**Conservation Status and Threat:**

**Red Data List Status:** Critically Endangered D.

Occurrence (Fynbos): 30 km<sup>2</sup> with 52% conserved and 0% lost; Occupancy: 17 km<sup>2</sup> with 52% conserved and 4% lost. Fragmentation index: 55%.

**Nature Reserves** (24 records): 17% in nature reserves - inadequately conserved.

**Habitat destruction** (22 records): 91% extensive natural habitat, 5% naturally linear habitats, 5% naturally fragmented habitats.

**Alien Invasive Species** (22 records): 64% *Pinus*, 36% none.

**Alien Density** (22 records): 36% alien-free, 64% sparse.

**Cultivation & Utilization:**

**Picking** (16 records): 100% no sign of picking.

**Cultivation Status:** No noted cultivation.

**Atlassers Notes:**

Some 17 plants of which 13 dead, 3 have flowered, and 1 in flower (ACU96101501);

About 50 Plants With 1 Or 2 Already Having  
Flowered For First Time (NAH96022402);  
Only a few scattered plants perhaps 20 -30 in  
all. Not yet reproductive (NAH96022403);  
One dead specimen (TLEY1032201);  
Previous records from this area are frequent!  
(WIJY0120405);

**Confusing Species:** None noted.  
Records of identification queries = 1

**Variation and Taxonomy:** No variation  
recorded.

**Distribution:** Add.

INCLUDEPICTURE

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MERGEFORMAT \d

*Sorocephalus teretifolius* (Meisn.) Phill. 1856, 1911  
**Pin-head Powderpuff**

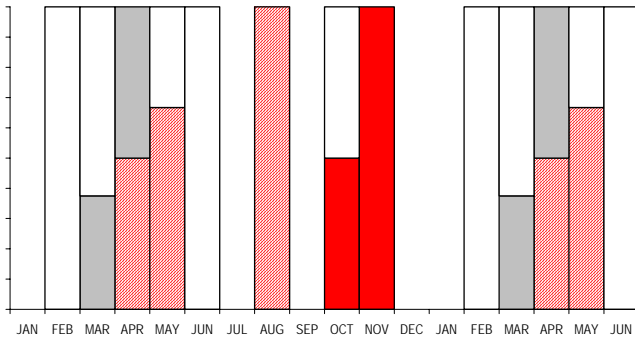
**Other Common Names:** Captitate Powderpuff.  
**Other Scientific Names:** *None*.

**24 Records**

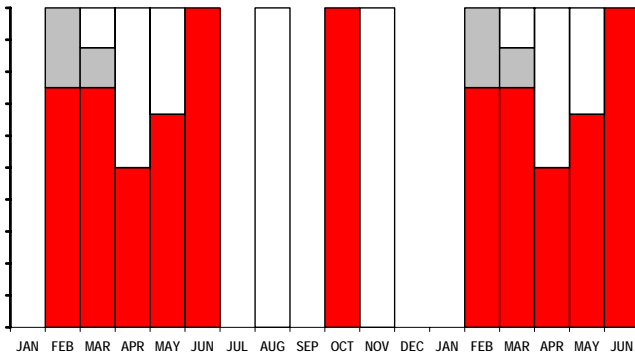
**Population** (23 records): 4% Common, 57% Frequent, 39% Rare.

**Dispersion** (19 records): 74% clumped, 26% variable.

**Flowering** (24 records with: Jan 0, Feb 4, Mar 8, Apr 2, May 3, Jun 1, Jul 0, Aug 1, Sep 0, Oct 4, Nov 1, Dec 0): Buds from Apr to May and Aug; Flowering from Oct to Nov; Peak Flowering and Over not recorded; Fruit from Mar to Apr; Nothing from Feb to Mar and May to Jun and Oct. Peak levels at 100% in Nov. Historically recorded as flowering from Nov to Dec.



**Growth** (24 records with: Jan 0, Feb 4, Mar 8, Apr 2, May 3, Jun 1, Jul 0, Aug 1, Sep 0, Oct 4, Nov 1, Dec 0): Much from Feb to Jun and Oct; Rare from Feb; None from Mar to May and Aug and Nov. Peak levels meaningless at 100% in Jun and Oct.



**Seedlings** (10 records): All without any seedlings present.

**Fire Survival** (1 record): 100% survived by seedlings only.

**Age to first flowering:** First flowers recorded at 6 years, 50% estimated at 5-6 years, and 100% recorded at 8 years.



**Height** (24 records): 25% 0-0.2 m tall, 75% 0.2-1 m tall.

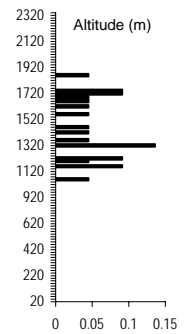
**Pollinators** : No data.

**Detailed Pollinators:** No additional data.

**Habitat:**

**Distance to Ocean** (22 records): 100% inland - further than 2 km from coast.

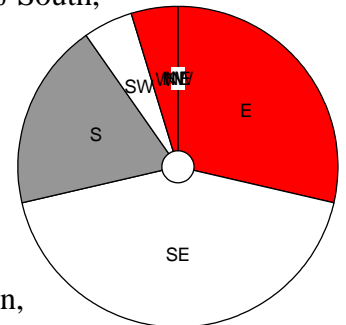
**Altitude** (22 records): 940 - 1760 m; 1100 *lq* - 1260 *med* - 1520 *uq*m.



**Landform** (22 records): 68% shallow soil, 32% deep soil.

**Slope** (22 records): 64% steep incline, 36% gentle incline.

**Aspect** (21 records): 52% South, 40% East, 7% West.



**Soil Type** (22 records):

68% sandy, 18% loamy, 5% peaty, 5% gravelly, 5% rocky.

**Soil Colour** (22 records): 64% grey, 14% black, 14% brown, 9% white.

**Geology** (22 records): 100% sandstone.

**Vegetation** (22 records): 100% shrubland.

**Conservation Status and Threat:**

**Red Data List Status:** Endangered

B1a(ii)b(i,ii,iii,iv,v)c(iv)+  
 2a(ii)b(i,ii,iii,iv,v)c(iv)

**Occurrence** (Fynbos): 118 km<sup>2</sup> with 96% conserved and 1% lost; **Occupancy:** 26 km<sup>2</sup> with 98% conserved and 0% lost.

**Fragmentation index:** 21%.

**Nature Reserves** (22 records): 95% in nature reserves - well conserved.

**Habitat destruction** (22 records): 95% extensive natural habitat, 5% corridors.

**Alien Invasive Species** (21 records):

90% *Pinus*, 10% none.

**Alien Density** (21 records): 10% alien-free, 67% sparse, 19% abundant, 5% dense.

**Cultivation & Utilization:**

**Picking** (14 records): 100% no sign of picking.

**Cultivation Status:** No noted cultivation.

**Atlasers Notes:**

About 30 plants of this rare species on a very moist slope but all specimens smaller and less vigorous than specimens from Blokkop (NAH94043001).

<Add: centripetal flowering SHR>

**Confusing Species:** None noted.  
Records of identification queries = 5.

**Variation and Taxonomy:** No variation noted.

**Distribution:** Add.

INCLUDEPICTURE

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*Sorocephalus capitatus* Rourke 1969  
Woolly Powderpuff

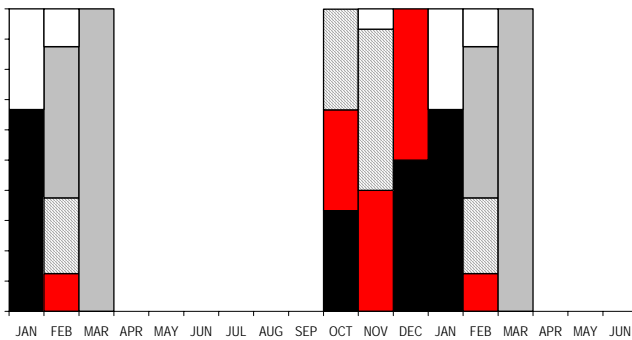
**Other Common Names:** None known.  
**Other Scientific Names:** *None*.

**34 Records**

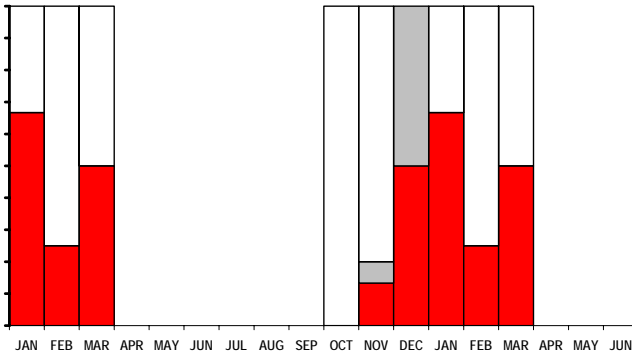
**Population** (34 records): 21% Common, 62% Frequent, 15% Rare, 3% Extinct.

**Dispersion** (32 records): 81% clumped, 19% variable.

**Flowering** (33 records with: Jan 3, Feb 8, Mar 2, Apr 0, May 0, Jun 0, Jul 0, Aug 0, Sep 0, Oct 3, Nov 15, Dec 2): Buds not recorded; Flowering from Oct to Dec; Peak Flowering from Dec to Jan and Oct; Over from Feb and Oct to Nov; Fruit from Feb to Mar; Nothing from Jan. Peak levels at 100% in Dec. Historically recorded as flowering from Oct to Feb.



**Growth** (33 records with: Jan 3, Feb 8, Mar 2, Apr 0, May 0, Jun 0, Jul 0, Aug 0, Sep 0, Oct 3, Nov 15, Dec 2): Much from Dec to Mar; Rare from Dec; None from Jan to Mar and Oct to Nov. Peak levels at 100% in Dec.



**Seedlings** (19 records): Absent in 89%; more seedlings than prefire adults in 1 case. Seedlings found in Jan.

**Fire Survival** (2 records): 100% survived by seedlings only.

**Age to first flowering:** First flowers recorded at 4 years, 50% estimated at 3-4 years, and 100% recorded at 8 years.



**Height** (33 records): 6% 0-0.2 m tall, 73% 0.2-1 m tall, 21% 1-2 m tall.

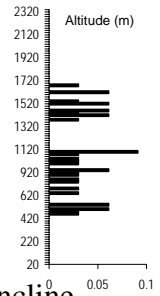
**Pollinators** (8 records): 50% beetles, 38% butterflies or moths, 13% bees or wasps.

**Detailed Pollinators** (3 records): Solitary Bee, Scarab Beetle, Ladybird Beetle.

**Habitat:**

**Distance to Ocean** (33 records): 100% inland - further than 2 km from coast.

**Altitude** (33 records): 440 - 1580 m; 720 *lq* - 920 *med* - 1320 *uq*m.

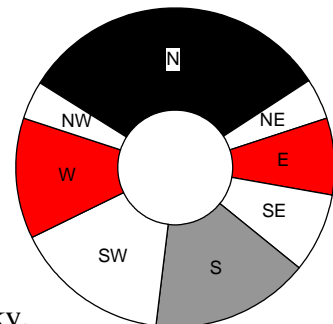


**Landform** (33 records): 58% deep soil, 33% shallow soil, 6% rocky outcrops, 3% swamp.

**Slope** (33 records): 61% gentle incline, 21% platform, 12% steep incline, 6% hill top.

**Aspect** (25 records):

36% North, 30% South, 22% West, 12% East.



**Soil Type** (33 records): 76% sandy, 12% loamy, 6% gravelly, 3% peaty, 3% rocky.

**Soil Colour** (33 records): 45% grey, 21% brown, 18% white, 9% yellow, 3% black, 3% orange.

**Geology** (33 records): 88% sandstone, 12% shale.

**Vegetation** (33 records): 100% shrubland.

**Conservation Status and Threat:**

**Red Data List Status:** Near Threatened D2(i), with Onderbos form as Near Threatened D2(i) and Piketberg form as Vulnerable D2(i).

**Occurrence (Fynbos):** 470 km<sup>2</sup> (165 km<sup>2</sup> - Onderbos, 35 km<sup>2</sup> - Piketberg) with 13 (12, 2)% conserved and 12 (4, 11)% lost; **Occupancy:** 52 (40, 11) km<sup>2</sup> with 9 (12, 1)% conserved and 0% lost. **Fragmentation index:** 7 (23, 32)%.

**Nature Reserves** (33 records): 21% in nature reserves.

**Habitat destruction** (32 records): 94% extensive natural habitat, 6% islands.

**Alien Invasive Species** (29 records): 90% none, 10% *Pinus*.

**Alien Density** (29 records): 90% alien-free,  
10% sparse.

**Cultivation & Utilization:**

**Picking** (25 records): 100% no sign of picking.

**Cultivation Status:** No noted cultivation.

**Atlassers Notes:**

One dead (AGRY4110608); In 3 clumps: 3 plus  
1 dead; 9 plus 1 dead; 11 plus 1 dead  
(AGRY4110609); Two patches  
(AGRY4110612); Almost 100 plants  
(AGRY4110701); Two patches: 10 and 100  
plants (AGRY4110702); About 30-40 plants  
(AGRY4110703); Two patches - each just  
over 100 plants (AGRY4110704); Some 18  
Plants (JBB99122202);

The pollinators are: scarab beetle (large protea  
but brown and yellow with red edges) and

typical protea beetle (hairy tufts on  
abdomen) and solitary bee (AGRY4110702);

**Confusing Species:** *S. lanatus*.

Records of identification queries = 8.

Records of corrected identification queries = 2.

**Variation and Taxonomy:** Piketberg

populations have lanceolate bracts.

Onderboskloof populations have ovate  
bracts.

**Distribution:** Add.

The lack of records outside of flowering  
suggests that the plants are not visible when  
not flowering.

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*Sorocephalus imbricatus* (Thunb.) R.Br. 1781, 1810  
**Tile-leaf Powderpuff**

**Other Common Names:** Gland-bearing Soranthe.

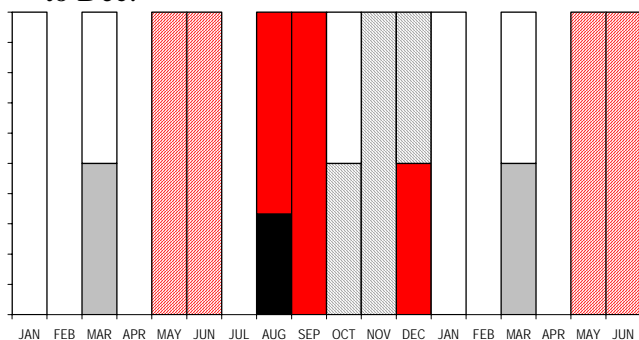
**Other Scientific Names:** *glanduligera* Salisb. ex Knight 1809.

**24 Records**

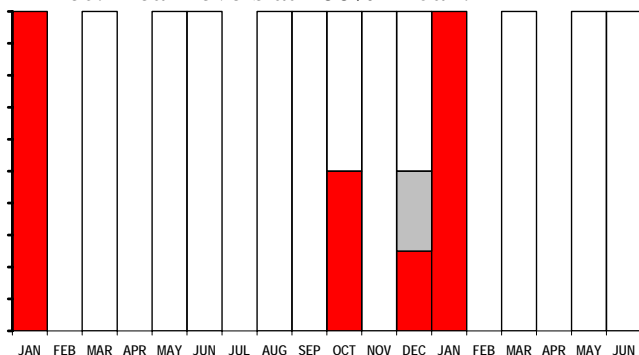
**Population** (24 records): 0% Common, 29% Frequent, 58% Rare, 13% Extinct.

**Dispersion** (17 records): 71% clumped, 24% variable, 6% evenly distributed.

**Flowering** (20 records with: Jan 2, Feb 0, Mar 2, Apr 0, May 1, Jun 3, Jul 0, Aug 3, Sep 2, Oct 2, Nov 1, Dec 4): Buds from May to Jun; Flowering from Aug to Sep and Dec; Peak Flowering from Aug; Over from Oct to Dec; Fruit from Mar; Nothing from Jan to Mar and Oct. Peak levels at 100% in Aug to Sep. Historically recorded as flowering from Sep to Dec.



**Growth** (20 records with: Jan 2, Feb 0, Mar 2, Apr 0, May 1, Jun 3, Jul 0, Aug 3, Sep 2, Oct 2, Nov 1, Dec 4): Much from Jan, Oct and Dec; Rare from Dec 25; None from Mar to Dec. Peak levels at 100% in Jan.



**Seedlings** (10 records): All without any seedlings present.

**Fire Survival** (3 records): 67% eliminated from the area by fires, 33% survived by seedlings only.

**Age to first flowering:** y4 0% (1), y8 100% (1). First flowers recorded at 8 years, 50% estimated at 5-7 years, and 100% recorded at 8 years.



**Height** (20 records): 65% 0.2-1 m tall, 35% 1-2 m tall.

**Pollinators** : No data.

**Detailed Pollinators:** No additional data.

**Habitat:**

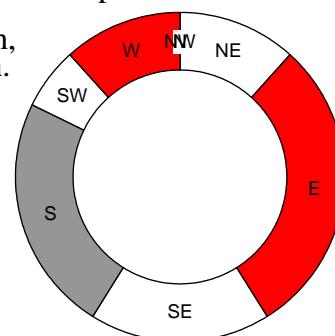
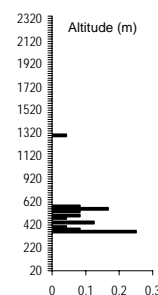
**Distance to Ocean** (24 records): 100% inland - further than 2 km from coast.

**Altitude** (24 records): 340 - 1200 m; 360<sub>lq</sub> - 440<sub>med</sub> - 500<sub>uq</sub>m.

**Landform** (23 records): 83% deep soil, 13% shallow soil, 4% swamp.

**Slope** (23 records): 52% gentle incline, 35% platform, 9% valley bottom, 4% hill top.

**Aspect** (17 records): 44% East, 35% South, 15% West, 6% North.



**Soil Type** (23 records): 96% sandy, 4% rocky.

**Soil Colour** (22 records): 68% grey, 27% white, 5% yellow.

**Geology** (22 records): 100% sandstone.

**Vegetation** (23 records): 96% shrubland, 4% plantations.

**Conservation Status and Threat:**

**Red Data List Status:** Critically Endangered B1a(i)b(i,ii,iii,iv,v)c(iv), C2b.

Occurrence (Fynbos): 85 km<sup>2</sup> with 19% conserved and 44% lost; Occupancy: 20 km<sup>2</sup> with 46% conserved and 14% lost.

Fragmentation index: 11%.

**Nature Reserves** (24 records): 79% in nature reserves - well conserved.

**Habitat destruction** (23 records): 96% extensive natural habitat, 4% islands.

**Alien Invasive Species** (23 records): 39% *Pinus*, 39% none, 22% *Hakea*.

**Alien Density** (23 records): 39% alien-free, 48% sparse, 13% abundant.

**Cultivation & Utilization:**

**Picking** (16 records): 100% no sign of picking.

**Cultivation Status:** No noted cultivation.

**Atlasers Notes:**

No plants found despite presence in previous fire cycle – looked hard (SMRY2061303 and 04); None seen where 2 plants were before the fire (DJI98032501);  
Some 50 plants - according to G Hansford a new population (COWY4112601); Riaan Van Der Walt (CN Ranger) counted about 50 plants on this site (LYM98032503); Some 2 plants dead and 7 alive (NAH96081003); Some 18 plants recorded (RPN96091003); Plants with numbered tags (roughly #23 to #41) seen alive: about 10 dead (SMRY2061306);

Plants very old and broken by wind (VDW96122301);

**Confusing Species:** None.  
Records of identification queries = 2.

**Variation and Taxonomy:** No variation noted.

**Distribution:** Add. Piketberg popu not found.

INCLUDEPICTURE

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# *Sorocephalus lanatus* (Thunb.) R.Br. 1781, 1810

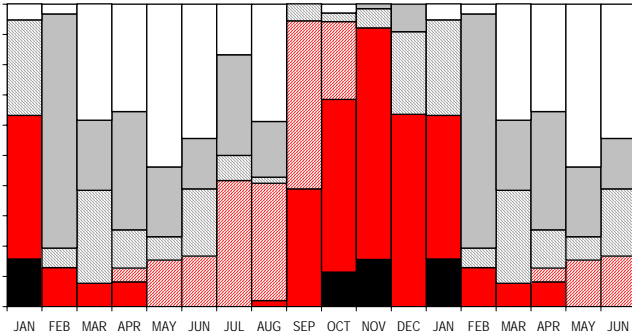
## Common Powderpuff

**Other Common Names:** Common Clusterhead, Shaggy Soranthe.  
**Other Scientific Names:** *ciliciflora* Salisb. ex. Knight 1809, *phyllicoides* Meisn. 1856, *schlechteri* Phill. 1911.

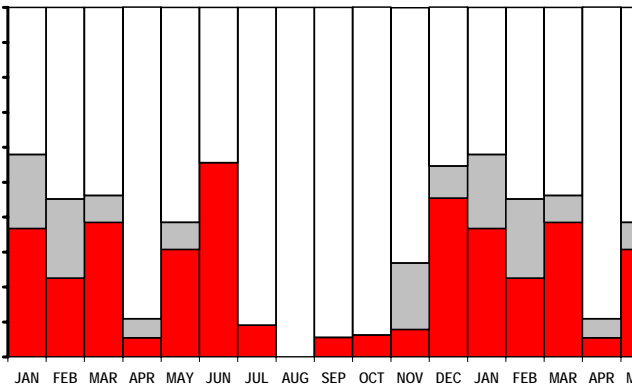
### 395 Records

**Population** (393 records): 17% Common, 57% Frequent, 25% Rare, 0.5% Extinct.  
**Dispersion** (344 records): 60% variable, 35% clumped, 4% widespread, 1% evenly distributed.

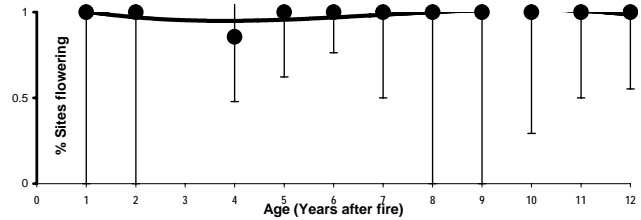
**Flowering** (393 records with: Jan 19, Feb 31, Mar 13, Apr 110, May 13, Jun 18, Jul 12, Aug 49, Sep 18, Oct 35, Nov 64, Dec 11): Buds from Jul to Oct; Flowering from Sep to Jan; Peak Flowering not prominent; Over from Dec to Jan and Mar and Jun; Fruit from Feb to May and Jul; Nothing from Mar to Jun and Aug. Peak levels at 100% in Sep. Historically recorded as flowering from early spring to late autumn with a peak in Dec.



**Growth** (388 records with: Jan 19, Feb 31, Mar 13, Apr 110, May 13, Jun 18, Jul 11, Aug 49, Sep 18, Oct 32, Nov 63, Dec 11): Much from Dec to Mar and May to Jun; Rare from Jan to Feb; None from all year with a peak in Jul to Oct. Peak levels bimodal: at 58% in Jan and 56% in Jun.



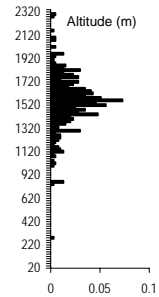
**Age to first flowering:** First flowers recorded at 1 years, 50% estimated at 2-3 years, and 100% recorded at 6 years. <check graph not agrees>



**Height** (391 records): 19% 0-0.2 m tall, 80% 0.2-1 m tall, 1% 1-2 m tall.  
**Pollinators** (7 records): 43% bees or wasps, 29% none observed, 14% flies, 14% beetles.  
**Detailed Pollinators** (4 records): Honey Bee (2), Solitary Bee, Monkey Beetle.

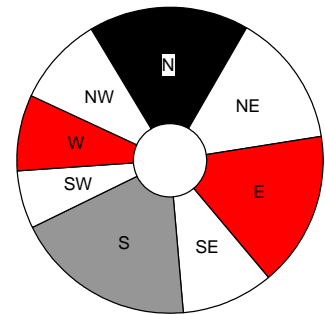
### Habitat:

**Distance to Ocean** (395 records): 100% inland - further than 2 km from coast.  
**Altitude** (395 records): 260 - 2200 m; 1320 *lq* - 1440 *med* - 1520 *uq*m.



**Landform** (392 records): 53% deep soil, 43% shallow soil, 3% rocky outcrops, 1% swamp.  
**Slope** (392 records): 51% gentle incline, 28% steep incline, 10% hill top, 9% platform, 2% valley bottom, 0.8% cliff.

**Aspect** (341 records): 29% East, 28% South, 27% North, 16% West.



**Soil Type** (393 records): 49% sandy, 21% rocky, 17% loamy, 12% gravelly, 0.8% clayey, 0.5% peaty.  
**Soil Colour** (392 records): 50% grey, 30% brown, 10% white, 6% yellow, 3% orange, 0.5% black, 0.3% red.  
**Geology** (385 records): 83% sandstone, 17% shale, 0.3% silcrete or ferricrete.  
**Vegetation** (392 records): 100% shrubland.

**Seedlings** (131 records): Absent in 98%: more seedlings than prefire adults in 1 case. Seedlings found in Jan.  
**Fire Survival** (35 records): 49% resprouted from underground boles, 37% survived by seedlings only, 9% escaped fires in fire-safe areas, 6% eliminated from the area by fires.

**Conservation Status and Threat:**  
**Red Data List Status:** Least Concern.  
**Occurrence** (Fynbos): 3 900 km<sup>2</sup> with 11% conserved and 13% lost; **Occupancy:** 455 km<sup>2</sup> with 15% conserved and 2% lost. **Fragmentation index:** 10%.  
**Nature Reserves** (395 records): 19% in nature reserves - inadequately conserved.  
**Habitat destruction** (387 records): 95% extensive natural habitat, 3% islands,

1% naturally linear habitats, 0.8% naturally fragmented habitats, 0.3% road verges.

**Alien Invasive Species** (382 records):

82% none, 17% *Pinus*, 0.3% Fabaceae (chiefly alien *Acacia*), 0.3% Myrtaceae, 0.3% other aliens.

**Alien Density** (382 records): 82% alien-free, 16% sparse, 0.8% abundant, 0.3% dense.

**Cultivation & Utilization:**

**Picking** (237 records): 100% no sign of picking.

**Cultivation Status:** No noted cultivation.

**Atlassers Notes:**

The fire could not have been too severe as plants resprouting after fire (JAT93112001); Plants were multi-stemmed (NGF99042402); With a single basal stem and ca 3 set of branchings! In three colonies (AGR95020402); Definitely multi-stemmed = rootstock? (APE92101709); Multi-stemmed plants (APE92101711); Creeper no resprouting hairy leaves (AGR95052413); Growth habit - slim single-stemmed plant, leaf len 15-18 mm; involucre bract length and width: 9 x 2 mm; densely hairy bracts; flowers per involucre varies: 6-8 but hard to be sure - only old flower heads present! (NAH94051401); Is multi - stemmed at base; leaf length: 10mm; involucre bract length: 5 mm; width: 2mm; hairs: few; number of flowers per involucre: 7 (SHR95010201);  
Two dead plants (CBE93042401);

Honeybee caught by spider on flowerhead (AGR95020402);

**Confusing Species:** None noted, but many atlassers uncertain of identification or uncertain due to variation.

Records of identification queries = 19

Records of corrected identification queries = 1.

**Variation and Taxonomy:**

Habit: Rourke states that single-stemmed, sparsely branched plants occur in the north (Cederberg and northern KoueBokkeveld), and in the south (southern KoueBokkeveld and Ceres area) the plants have a denser, branched and interlocking branch system. Atlas data suggest that these latter are resprouters. Leaf length: Leaves in the Cederberg are 4-9 mm long, 8-12mm long for the KoueBokkeveld. Leaves from the Swartuggens are 5-10 mm long, and from Ceres and the Winterhoek are 12-18mm long. Bracts: bract size and hairiness (from hairy to hairless) varies at random throughout the range. Flowers per involucre are usually 4, but on bigger flowerheads 8 flowers may be present usually on basal heads. Flower colour varies from white to pale pink, but some colonies have deep pink perianths.

**Distribution:** Add.

INCLUDEPICTURE

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***Sorocephalus scabridus* Meisn.**  
**Tulbagh Powderpuff**

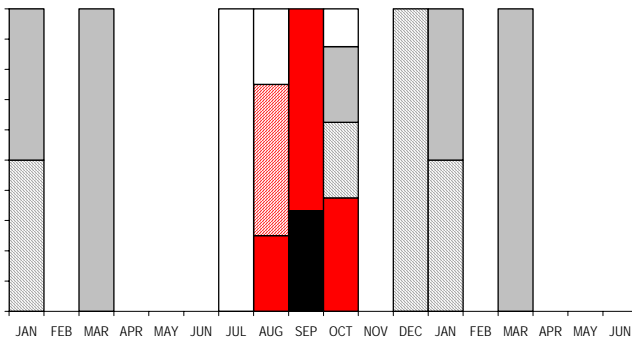
**Other Common Names:** None known.  
**Other Scientific Names:** *None*.

**24 Records**

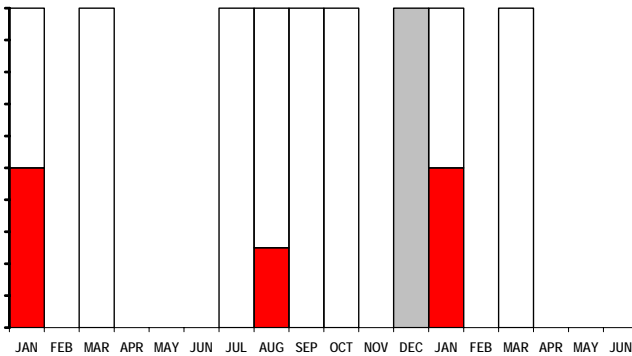
**Population** (24 records): 29% Common, 67% Frequent, 4% Rare.

**Dispersion** (24 records): 71% clumped, 25% variable, 4% evenly distributed.

**Flowering** (24 records with: Jan 2, Feb 0, Mar 2, Apr 0, May 0, Jun 0, Jul 1, Aug 4, Sep 6, Oct 8, Nov 0, Dec 1): Buds from Aug; Flowering from Aug to Oct; Peak Flowering from Sep; Over from Jan, Oct and Dec; Fruit from Jan, Mar and Oct; Nothing from Jul to Aug. Peak levels at 100% in Sep. Historically recorded as flowering from Oct to Nov.



**Growth** (22 records with: Jan 2, Feb 0, Mar 2, Apr 0, May 0, Jun 0, Jul 1, Aug 4, Sep 5, Oct 7, Nov 0, Dec 1): Much from Jan and Aug; Rare from Dec; None from Jan to Oct. Peak levels at 100% in Dec.



**Seedlings** (7 records): Absent in 71%: more seedlings than prefire adults in 1 case. Seedlings found in Oct.

**Fire Survival** (1 record): 100% survived by seedlings only.

**Age to first flowering:** First flowers recorded at 6 years, 50% estimated at 4-5 years, and 100% recorded at 6 years.



**Height** (24 records): 17% 0-0.2 m tall, 83% 0.2-1 m tall.

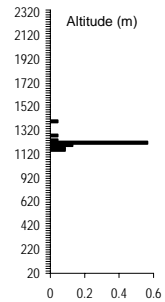
**Pollinators** (3 records): 33% bees or wasps, 33% flies, 33% beetles.

**Detailed Pollinators** (2 records): Scarab Beetle, Honey Bee.

**Habitat:**

**Distance to Ocean** (23 records): 100% inland - further than 2 km from coast.

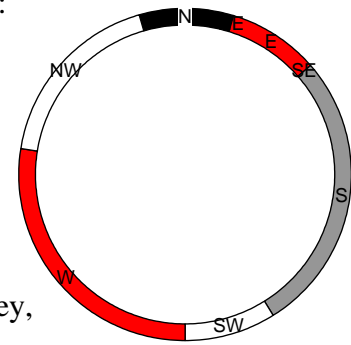
**Altitude** (23 records): 1040 - 1300 m; 1080 *lq* - 1120 *med* - 1120 *uq* m.



**Landform** (23 records): 91% deep soil, 9% shallow soil.

**Slope** (20 records): 45% platform, 30% gentle incline, 20% valley bottom, 5% hill top.

**Aspect** (11 records): 41% West, 32% South, 18% North, 9% East.



**Soil Type** (23 records): 96% sandy, 4% loamy.

**Soil Colour** (23 records): 70% grey, 30% white.

**Geology** (23 records): 100% sandstone.

**Vegetation** (23 records): 96% shrubland, 4% grassland.

**Conservation Status and Threat:**

**Red Data List Status:** Critically Endangered B1a(i,ii)c(iv).

Occurrence (Fynbos): 20 km<sup>2</sup> with 91% conserved and 0% lost; Occupancy: 17 km<sup>2</sup> with 93% conserved and 0% lost. Fragmentation index: 77%.

**Nature Reserves** (23 records): 91% in nature reserves - well conserved.

**Habitat destruction** (23 records): 96% extensive natural habitat, 4% naturally fragmented habitats.

**Alien Invasive Species** (22 records): 100% none.

**Alien Density** (22 records): 100% alien-free.

**Cultivation & Utilization:**

**Picking** (16 records): 100% no sign of picking.

**Cultivation Status:** No noted cultivation.

**Atlasers Notes:**

We counted exactly 98 plants: 86 in this plot & 12 in 02 (AWA99092703); We think this is all along this plateau - we found 35 plants here (AWA99092905); Some 13 plants (AWA99092906); Appears to be a new population - consists of about 12 plants along track (NAHY1031706); A few dead bushes - drought-related? (WIJY0103010+11);

Seedlings clustered around skeletons of adult plants (NAH96081901);

**Confusing Species:** None noted.  
Records of identification queries = 2.

**Variation and Taxonomy:** No variation known.

**Distribution:** Add.

INCLUDEPICTURE

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