

Serruria deluvialis Rourke 1990 Grass Spiderhead

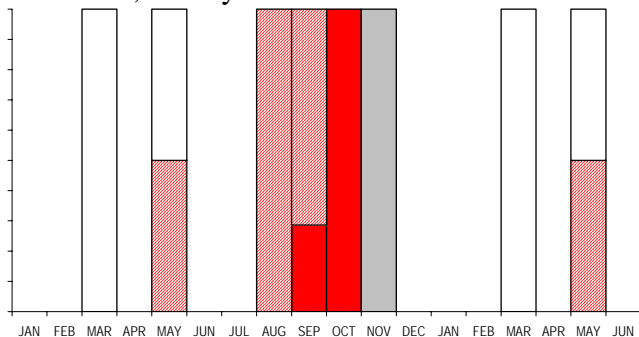
Other Common Names: None known.
Other Scientific Names: *patersonii* nomen nudum - in Tansley.

15 Records

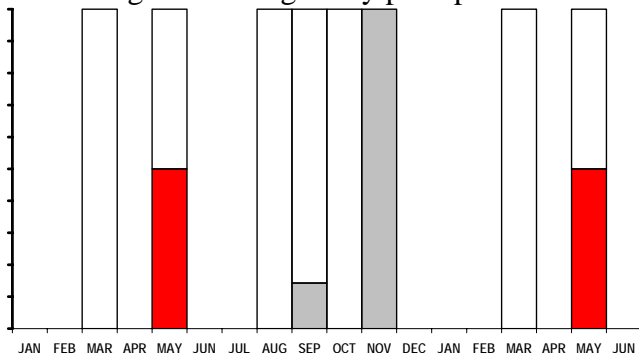
Population (15 records): 53% Common, 40% Frequent, 7% Rare.

Dispersion (15 records): 40% variable, 27% widespread, 27% clumped, 7% evenly distributed.

Flowering (15 records with: Jan 0, Feb 0, Mar 1, Apr 0, May 2, Jun 0, Jul 0, Aug 3, Sep 7, Oct 1, Nov 1, Dec 0): Buds from May to Sep; Flowering from Sep to Oct; Peak Flowering and Over not recorded; Fruit from Nov; Nothing from Mar to May. Peak levels unreliable at 100% from Sep to Oct. Historically recorded as flowering from Sep to Nov, mainly Oct.



Growth (15 records with: Jan 0, Feb 0, Mar 1, Apr 0, May 2, Jun 0, Jul 0, Aug 3, Sep 7, Oct 1, Nov 1, Dec 0): Much from May; Rare from Nov; None from Mar to Oct. Peak levels unreliable at 50% from May, with missing data during likely peak period.



Seedlings (11 records): All without any seedlings present.

Fire Survival (1 record): 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 4 years.



Height (15 records): 60% 0-0.2 m tall, 40% 0.2-1 m tall.

Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

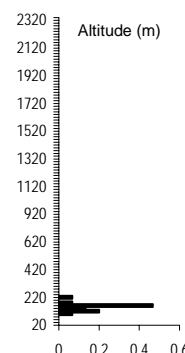
Distance to Ocean (15 records): 100% inland - further than 2 km from coast.

Altitude (15 records): 80 - 220 m; 100_{lq} - 140_{med} - 160_{uq}m.

Landform (15 records): 93% deep soil, 7% shallow soil.

Slope (15 records): 80% gentle incline, 20% platform.

Aspect (15 records): 50% North, 37% West, 10% South, 3% East.

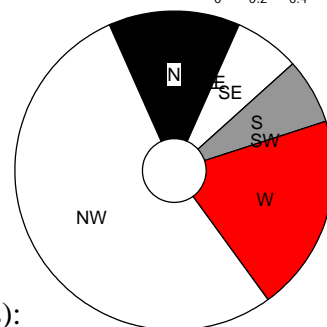


Soil Type (15 records): 53% sandy, 47% loamy.

Soil Colour (15 records): 60% grey, 27% brown, 7% white, 7% yellow.

Geology (14 records): 50% sandstone, 50% shale.

Vegetation (15 records): 100% shrubland.



Conservation Status and Threat:

Red Data List Status: Endangered A2c, B1a(i)c(iv)+2a(i)c(iv).

Occurrence (Fynbos): 7 km² with 78% conserved and 0% lost; **Occupancy:** 14 km² with 68% conserved and 0% lost. Fragmentation index meaningless.

Nature Reserves (15 records): 93% in nature reserves - well conserved.

Habitat destruction (15 records): 100% extensive natural habitat.

Alien Invasive Species (15 records): 47% none, 40% *Pinus*, 13% Fabaceae (chiefly alien *Acacia*).

Alien Density (15 records): 47% alien-free, 53% sparse.

Cultivation & Utilization:

Picking (15 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlasers Notes: None.

Confusing Species: None recorded.

Variation and Taxonomy: No variation noted.

Distribution: Add.

INCLUDEPICTURE

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Serruria rebeloi Rourke 1999 Clandestine Spiderhead

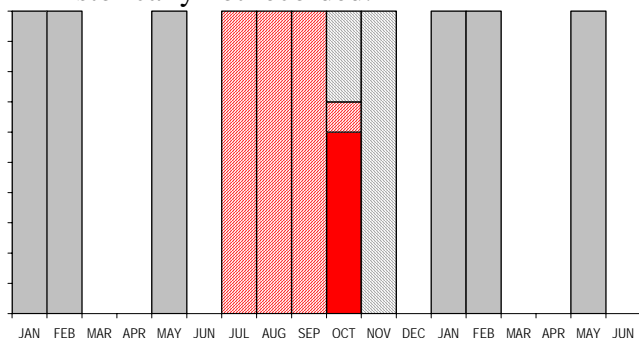
Other Common Names: None known.
Other Scientific Names: None.

21 Records

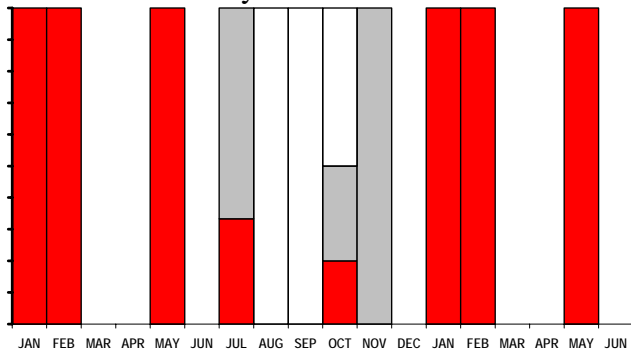
Population (21 records): 38% Common, 38% Frequent, 24% Rare.

Dispersion (17 records): 76% clumped, 24% variable.

Flowering (19 records with: Jan 1, Feb 1, Mar 0, Apr 0, May 1, Jun 0, Jul 3, Aug 1, Sep 1, Oct 10, Nov 1, Dec 0): Buds from Jul to Sep; Flowering from Oct; Peak Flowering not recorded; Over from Oct to Nov; Fruit from Jan to May; Nothing not recorded. Peak levels unreliable at 100% in Oct. Historically not recorded.



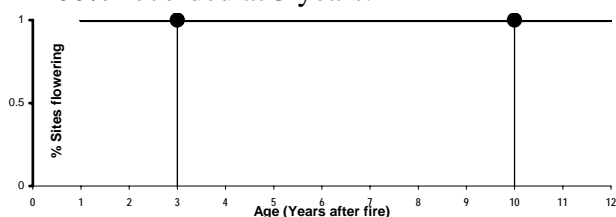
Growth (19 records with: Jan 1, Feb 1, Mar 0, Apr 0, May 1, Jun 0, Jul 3, Aug 1, Sep 1, Oct 10, Nov 1, Dec 0): Much from Jan to Jul; Rare from Jul and Oct to Nov; None from Aug to Oct. Peak levels unreliable at 100% from Jan to May.



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

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

Age to first flowering: First flowers recorded at 3 years, 50% estimated at 2-3 years, and 100% recorded at 3 years.



Height (19 records): 79% 0-0.2 m tall, 21% 0.2-1 m tall.

Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

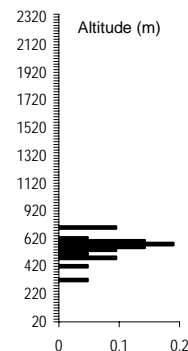
Distance to Ocean (21 records): 100% inland - further than 2 km from coast.

Altitude (21 records): 300 - 700 m; 500_{lq} - 560_{med} - 580_{uq} m.

Landform (19 records): 95% deep soil, 5% shallow soil.

Slope (19 records): 74% gentle incline, 21% steep incline, 5% hill top.

Aspect (18 records): 64% North, 22% South, 14% East.

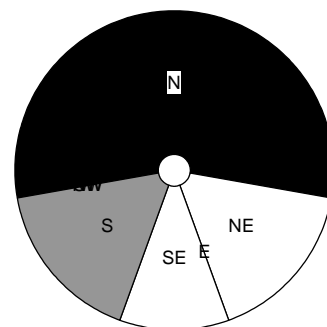


Soil Type (19 records): 53% sandy, 32% loamy, 11% peaty, 5% gravelly.

Soil Colour (19 records): 58% grey, 26% black, 11% brown, 5% white.

Geology (21 records): 95% sandstone, 5% shale.

Vegetation (21 records): 100% shrubland.



Conservation Status and Threat:

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

Occurrence (Fynbos): 20 km² with 6% conserved and 5% lost; **Occupancy:** 20km² with 9% conserved and 10% lost.
Fragmentation index: 95%.

Nature Reserves (21 records): 10% in nature reserves - inadequately conserved.

Habitat destruction (19 records): 100% extensive natural habitat.

Alien Invasive Species (18 records): 56% none, 17% *Hakea*, 17% *Pinus*, 6% Fabaceae (chiefly alien *Acacia*), 6% Myrtaceae.

Alien Density (18 records): 56% alien-free, 44% sparse.

Cultivation & Utilization:

Picking (17 records): 100% no sign of picking.
Cultivation Status: No noted cultivation.

Atlassers Notes:

Not present in unburnt veld (SHR98081001); Growing in a recently burned island of veld (LYM98101506);

A new species! Our first record! JPR confirmed 30/07/98 (AGR98072904); Atlassed as species nova - single main stem leaves pointing vertically from horizontal stems

flower stalks emerging from leaf axils
(SHR98081001); Small whip-leaf bushlet
with horizontal branches leaves all upwards -
Atlased as species nova (SMR98072905);

Confusing Species: Misidentified as *S.*
flagellaris, which has a similar growth habit
to adult *S. rebeloi*, but has hairless flowers.
Records of identification queries = 7.
Records of corrected identification queries = 2.

Variation and Taxonomy: No variation noted.

Distribution: Add.

INCLUDEPICTURE

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***Serruria aemula* var. *aemula* Salsib. ex Knight 1809**
Cape Flats Strawberry Spiderhead
Vlakte spinnekopbos

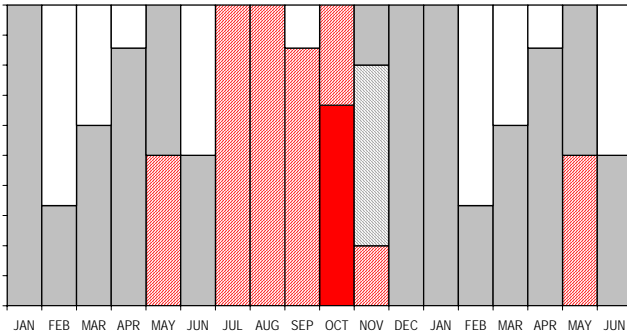
Other Common Names: Rival *Serruria*, Tygerberg Spiderhead.
Other Scientific Names: *ciliata* R.Br. 1810, *glomerata* Willd ex Meisn. 1856,

59 Records

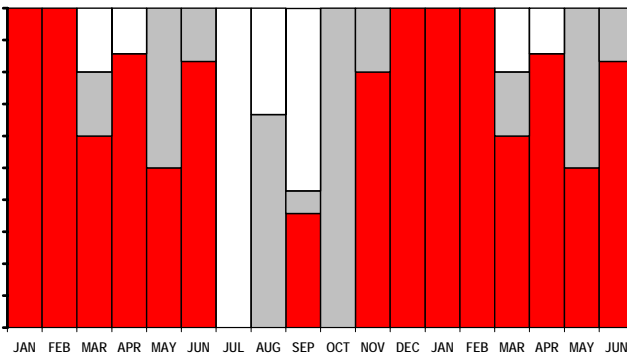
Population (57 records): 14% Common, 46% Frequent, 35% Rare, 5% Extinct.

Dispersion (48 records): 54% variable, 46% clumped.

Flowering (54 records with: Jan 1, Feb 6, Mar 5, Apr 7, May 2, Jun 6, Jul 1, Aug 3, Sep 14, Oct 3, Nov 5, Dec 1): Buds from May and Jul to Nov; Flowering from Oct; Peak Flowering not recorded; Over from Nov; Fruit from Nov to Jun; Nothing from Feb to Mar and Jun. Peak levels unreliable at 100% in Oct. Historically recorded as flowering from Jul to Oct.



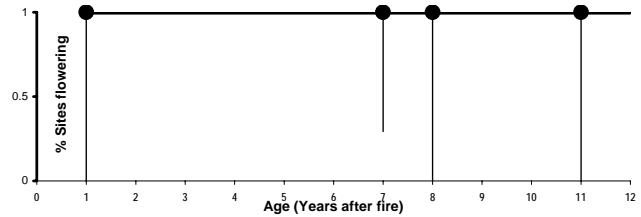
Growth (54 records with: Jan 1, Feb 6, Mar 5, Apr 7, May 2, Jun 6, Jul 1, Aug 3, Sep 14, Oct 3, Nov 5, Dec 1): Much from Sep to Jun; Rare from Mar, May, Aug and Oct to Nov; None from Mar and Jul to Sep. Peak levels unreliable at 100% from Dec to Feb.



Seedlings (34 records): Absent in 88%: fewer seedlings than prefire adults in 1 case, and more in 1 case. Seedlings found in Mar and Sep.

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

Age to first flowering: First flowers recorded at 1 years, 50% estimated at 1-5 years, and 100% recorded at 7 years.



Height (55 records): 2% 0-0.2 m tall, 96% 0.2-1 m tall, 2% 1-2 m tall.

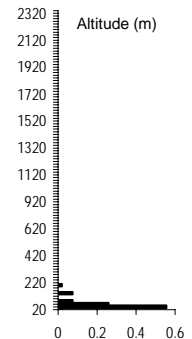
Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

Distance to Ocean (52 records): 100% inland - further than 2 km from coast.

Altitude (52 records): 20 - 140 m; 20_{iq} - 40_{med} - 40_{uq}m.



Landform (52 records): 100% deep soil.

Slope (51 records): 86% platform, 10% valley bottom, 4% gentle incline.

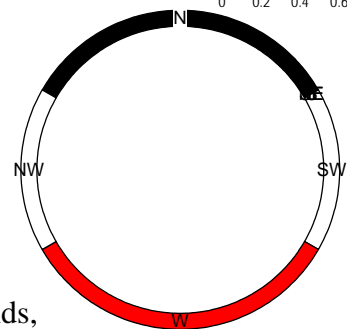
Aspect (5 records): 50% West, 40% North, 10% South.

Soil Type (52 records): 100% sandy.

Soil Colour (51 records): 57% white, 41% grey, 2% yellow.

Geology (50 records): 90% Tertiary sands, 10% sandstone.

Vegetation (52 records): 96% shrubland, 4% suburban.



Conservation Status and Threat:

Red Data List Status: Critically Endangered A2c, B1b(i,ii,iii,iv,v)c(iv) + 2b(i,ii,iii,iv,v)c(iv).

Occurrence (Fynbos): 55 km² with 2% conserved and 88% lost; **Occupancy:** 31 km² with 3% conserved and 100% lost. **Fragmentation index:** 31%.

Nature Reserves (52 records): 58% in nature reserves - well conserved.

Habitat destruction (52 records): 58% islands, 17% road verges, 13% patches, 8% extensive natural habitat, 4% corridors.

Alien Invasive Species (50 records): 96% Fabaceae (chiefly alien *Acacia*), 4% Myrtaceae.

Alien Density (50 records): 46% sparse, 44% abundant, 8% dense, 2% impenetrable.

Cultivation & Utilization:

Picking (47 records): 100% no sign of picking.
Cultivation Status: Plantings - 2 records (3%).

Atlassers Notes:

Damage by herbivores? (NAH92052202);
Destroyed by housing about 1996/7
(AGR92030503); This population was wiped
out - only skeletons seen code FC
(AGRY1062604); Bushcut - ID from
flowerhead remnants – horrific destruction!
(IEBY1062601); Destroyed by housing
about 1996/7 (NAH92052202); It is
surprising that the species has survived
(PVR9411701);
Plus 1 dead (AGR99031301); 2 dead plants
(LYM98052101);

Severe (30-50%) mortality - drought related? of
many species in this area of sandplain fynbos
– *S. aemula* particularly hard hit: about 30 %
dead (NAHY0081902);

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

Variation and Taxonomy: The taxa *congesta*
and *foeniculacea* are dealt with elsewhere.

Distribution: Add.

INCLUDEPICTURE

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***Serruria aemula* var. *congesta* (R. Br.) 1810 <comb not made>
Macassar Spiderhead**

Other Common Names: None known.
Other Scientific Names: *abrotanifolia* var. *minor* Andr. 1803, *arenaria* Salisb. ex Knight 1809, *congesta* R.Br. 1810, *emarginata* Sweet 1827, *phylicoides* Willd ex Meisn 1856.

0 Records: Extinct

Red Data List Status: Extinct, both in the wild and *ex situ*, last seen in 1985.

Occurrence (Fynbos): 0 km² with 0% conserved and 100% lost; **Occupancy:** 0 km² with 0% conserved and 100% lost. **Fragmentation index:** meaningless. **Original occupancy** about 50 km².

Population: Probably Common and Frequent, but now extinct.

Dispersion: Probably Variable and Clumped.

Flowering: Probably Buds from Jul to Oct; Flowering from Oct; Peak Flowering not significant; Over from Nov; Fruit from Dec to Jun; Nothing from Feb to Apr. Historically not recorded.

Growth: Probably Much from Nov to Jun; Rare from Jul and Oct; None from Jul to Sep.

Seedlings: Probably No data.

Fire Survival: Probably surviving as seeds only.

Age to first flowering: Probably first flowers recorded at 1 years, 50% at 2-3 years and 100% at 7 years.

Height: Probably 5% 0-0.2 m tall, and 95 0.2-1 m tall.

Pollinators: Probably No data.

Habitat:

Distance to Ocean: All 100% inland – more than 2km from coast.

Altitude: Probably 20 - 120 m; 40_{lq} - 50_{med} - 60_{uq}m.

Landform: Probably 100% deep soil.

Slope: Probably 90% platform, 10% valley bottom.

Aspect: Probably 60% West, 40% South.

Soil Type: Probably 100% sandy.

Soil Colour: Probably 60 white, 40% grey.

Geology: Probably 90% Tertiary sands, 10% granite.

Vegetation: Probably 100% shrubland.

Conservation Status and Threat:

Nature Reserves: Probably 0% in nature reserves..

Habitat destruction: Probably 60% islands, 40% road reserves.

Alien Invasive Species: Probably 95% Fabaceae (chiefly alien *Acacia*), 5% annual grasses.

Alien Density: Probably 50% sparse, 50% abundant.

Cultivation & Utilization:

Picking: Probably no sign of picking.

Cultivation Status: Probably no noted cultivation.

Atlassers Notes: None.

Confusing Species: None noted, although there appears to be a gradation in size. During exceptional years robust specimens with many, robust flowerheads may occur throughout the range of the species, confusing identification.

Variation and Taxonomy: It was thought that this form occurred in the eastern end of the species distribution. However, odd specimens of a more robust nature do occur in the herbarium from the northern populations of *S. aemula*, although none were noted by atlassers or seen during extensive searches in the field.

Distribution: Add.

INCLUDEPICTURE

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Serruria foeniculacea R.Br 1810 Rondevlei Spiderhead

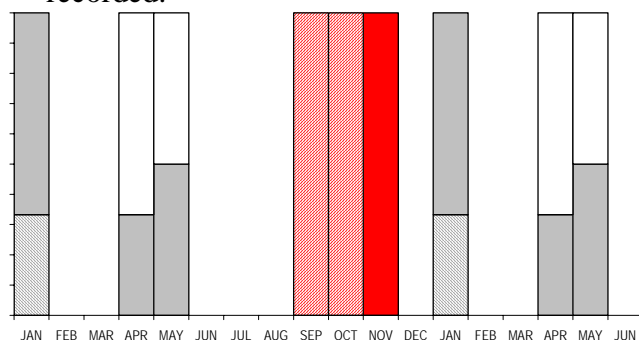
Other Common Names: None known.
Other Scientific Names: *abrotanifolia* Andr 1803, *odorata* Andr 1803.

14 Records

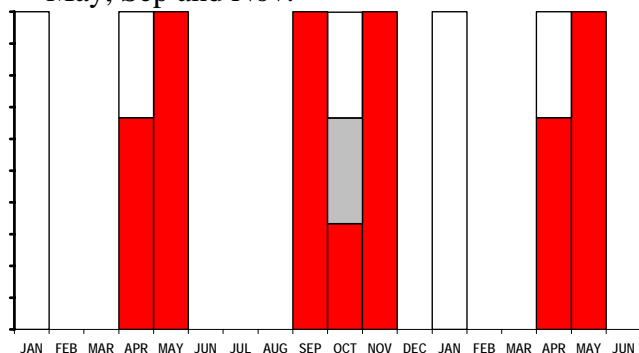
Population (7 records): 0% Common, 86% Frequent, 14% Rare.

Dispersion (7 records): 57% variable, 43% clumped.

Flowering (14 records with: Jan 3, Feb 0, Mar 0, Apr 3, May 2, Jun 0, Jul 0, Aug 0, Sep 1, Oct 3, Nov 2, Dec 0): Buds from Sep to Oct; Flowering from Nov; Peak Flowering not recorded; Over from Jan; Fruit from Jan to May; Nothing from Apr to May. Peak levels unreliable at 100% in Nov. Historically not recorded.



Growth (14 records with: Jan 3, Feb 0, Mar 0, Apr 3, May 2, Jun 0, Jul 0, Aug 0, Sep 1, Oct 3, Nov 2, Dec 0): Much from Apr to Nov; Rare from Oct; None from Jan to Apr and Oct. Peak levels unreliable at 100% from May, Sep and Nov.



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

Fire Survival : No data.

Age to first flowering: First flowers recorded at 6 years, no data from other veld ages.

Height (14 records): 100% 0.2-1 m tall.

Pollinators (1 record): 100% butterflies or moths.

Detailed Pollinators: No additional data.

Habitat:

Distance to Ocean (6 records): 100% inland - further than 2 km from coast.

Altitude (6 records): 20 - 40 m; 0_{lq} - 20_{med} - 20_{uq}m.

Landform (6 records): 100% deep soil.

Slope (6 records): 100% platform.

Aspect (0 records).

Soil Type (6 records): 100% sandy.

Soil Colour (6 records): 83% grey, 17% white.

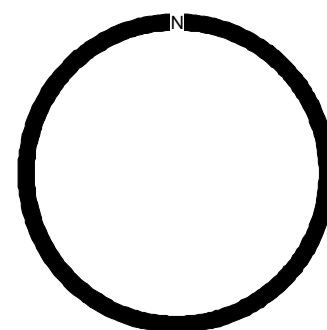
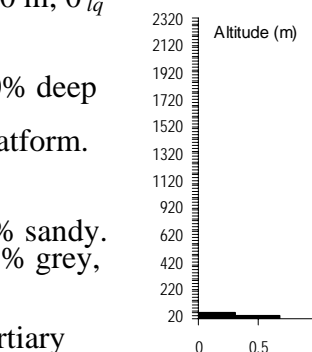
Geology (6 records): 83% sandstone, 17% Tertiary sands.

Vegetation (6 records):

67% shrubland, 17% agricultural lands, 17% suburban.

Conservation Status and Threat:

Red Data List Status: Critically Endangered A2c,



B1a(i,ii)b(i,ii,iii,iv,v)c(iv) + 2a(i,ii)b(i,ii,iii,iv,v)c(iv), C2a(i,ii)b, D.
Occurrence (Fynbos): 1 km² with 29% conserved and 100% lost; **Occupancy:** 6 km² with 23% conserved and 67% lost. Fragmentation index meaningless.

Nature Reserves (6 records): 100% in nature reserves - well conserved.

Habitat destruction (6 records): 50% islands, 33% extensive natural habitat, 17% naturally fragmented habitats.

Alien Invasive Species (6 records): 100% Fabaceae (chiefly alien *Acacia*).

Alien Density (6 records): 83% sparse, 17% abundant.

Cultivation & Utilization:

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

Cultivation Status: Plantings - 7 records (50%), Augmentations - 5 records (36%).

Atlasers Notes:

Also planted most along the walkways the biggest clump near the entrance gate (PVR Y0092001); Has been planted according to mr Dalton Gibbs of Rondevlei reserve. This had been known in the reserve and 340 have been planted (cuttings) many have survived a little above the vlei salty water level (WIJ95010601);

Also seen in the sanctuary from the road on the way to Zeekoeivlei (LYM95101401); This is one plant that had been known in the reserve (WIJ95010601);

Most of the plants are fenced and I counted 60 plants (NGF95112501);

Confusing Species: None known: might have been difficult to tell from *S. aemula*. During historical times had their ranges abutted.

Variation and Taxonomy: Variously considered a subspecies of *S. aemula* or a full blown species. Definitely closely related.

Distribution: Add.

INCLUDEPICTURE

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Serruria cyanoides (L.) R.Br. 1753, 1810
Wynberg Spiderhead

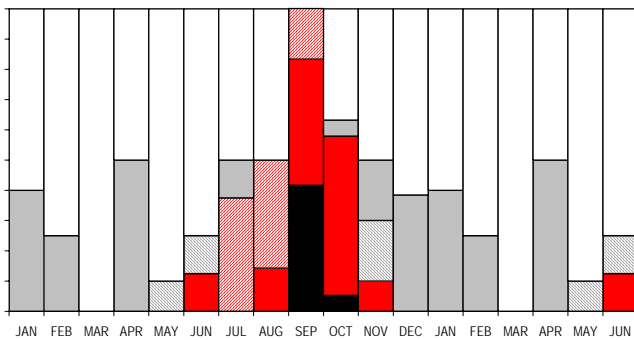
Other Common Names: None known.
Other Scientific Names: None.

129 Records

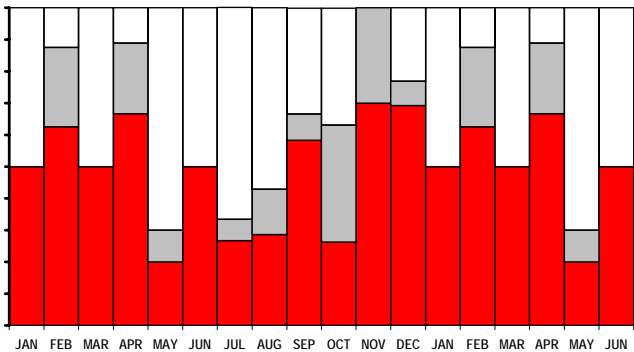
Population (129 records): 10% Common, 69% Frequent, 21% Rare.

Dispersion (117 records): 57% variable, 38% clumped, 5% evenly distributed.

Flowering (127 records with: Jan 5, Feb 8, Mar 2, Apr 10, May 10, Jun 8, Jul 16, Aug 14, Sep 12, Oct 19, Nov 10, Dec 13): Buds from Jul to Aug; Flowering from Sep to Oct; Peak Flowering from Sep; Over from Nov; Fruit from Nov to Feb and Apr; Nothing from Oct to Aug. Peak levels at 100% in Sep. Historically recorded as flowering from Jul to Oct.



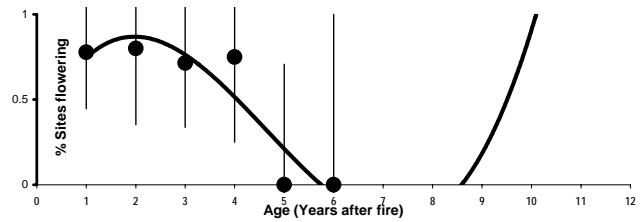
Growth (126 records with: Jan 6, Feb 8, Mar 2, Apr 9, May 10, Jun 8, Jul 15, Aug 14, Sep 12, Oct 19, Nov 10, Dec 13): Much from all year round; Rare from Feb, Apr and Oct to Nov; None from Dec to Jan, Mar and May to Oct. Peak levels at 100% in Nov.



Seedlings (29 records): Absent in 93%; fewer seedlings than prefire adults in 1 case. Seedlings found in Oct.

Fire Survival (27 records): 96% resprouted from underground boles, 4% survived by seedlings only.

Age to first flowering: First flowers recorded at 1 years, 50% estimated at 1 years, 100% never recorded, with a maximum of 83% at 2 years and flowering ceasing after 4 years.



Height (128 records): 53% 0-0.2 m tall, 45% 0.2-1 m tall, 2% 1-2 m tall.

Pollinators (4 records): 50% bees or wasps, 25% flies, 25% beetles.

Detailed Pollinators: No additional data.

Habitat:

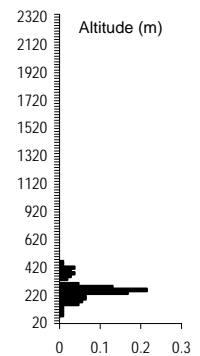
Distance to Ocean (107 records): 57% coastal - less than 2 km from coast.

Altitude (107 records): 60 - 460 m; 200 *lq* - 240 *med* - 260 *uq*m.

Landform (105 records): 85% deep soil, 11% shallow soil, 2% swamp, 2% rocky outcrops.

Slope (105 records): 63% gentle incline, 12% platform, 10% steep incline, 10% hill top, 4% valley bottom.

Aspect (86 records): 53% South, 22% West, 16% North, 9% East.

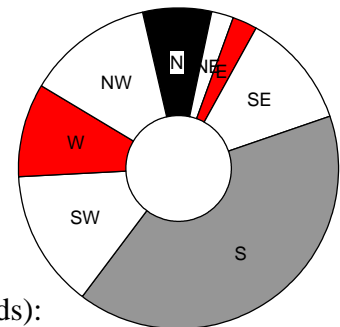


Soil Type (105 records): 95% sandy, 4% loamy, 1.0% gravelly.

Soil Colour (104 records): 81% grey, 12% brown, 8% white.

Geology (103 records): 89% sandstone, 5% silcrete or ferricrete, 5% Tertiary sands, 1.0% granite.

Vegetation (105 records): 99% shrubland, 1.0% grassland.



Conservation Status and Threat:

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

Occurrence (Fynbos): 81 km² with 41% conserved and 40% lost; **Occupancy:** 31 km² with 37% conserved and 23% lost. **Fragmentation index:** 32%.

Nature Reserves (107 records): 56% in nature reserves - well conserved.

Habitat destruction (102 records): 94% extensive natural habitat, 5% islands, 1.0% corridors.

Alien Invasive Species (100 records): 54% Fabaceae (chiefly alien *Acacia*), 45% none, 1% Myrtaceae.

Alien Density (100 records): 45% alien-free, 46% sparse, 8% abundant, 1% dense.

Cultivation & Utilization:

Picking (82 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

Already flowered even though veld just over 1 year old (AGRY0081903); The resprouting plants all covered in flowers to the extent that the foliage is hardly visible (CVV94091503); Resprouters covered with flowers (JID99082603);

Flowers very sparse (CVV97100401); Only a few plants in flower, the rest looked as if they would not flower (JAT95081602); Unburned veld: no flowers no buds and rare Growth (JID99082603); Most plants show no signs of flowering - only about 4 seen in flower (TLE95090203); Some plants were apparently well in flower last year but have no buds or flowers this year (WIJ96111701);

Leaves have 3-7 points each but Sasol Proteas says 7-11 inspection of specimens in Bolus Herbarium shows 2 specimens with 4-10 averaging 7-8 and 1 specimen with 3-4 points only. this is not a good criterion!

(TLE96101305); 3-8 points per leaf (TLE96102603);

Many plants revealed by fire! Previously only a few were seen here (AKS94072006); Only one plant noted (HCA92121301, HCA93111101);

So full of bees difficult to get close! (JID94092102);

Confusing Species: Misidentified with *S. hirsute* (which is not a resprouter, and is far more robust), *S. fasciflora* and *S. inconspicua* (which are not resprouters and have compound flowerheads with small straight flowers), and *S. collina*, which is a resprouter but with trailing (not erect) stems and compound flowerheads.

Records of identification queries = 15.

Records of corrected identification queries = 4.

Variation and Taxonomy: No variation noted.

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SECYAN_m.jpg" *

MERGEFORMAT \d

Serruria furcellata R.Br. 1810
Kraaifontein Spiderhead

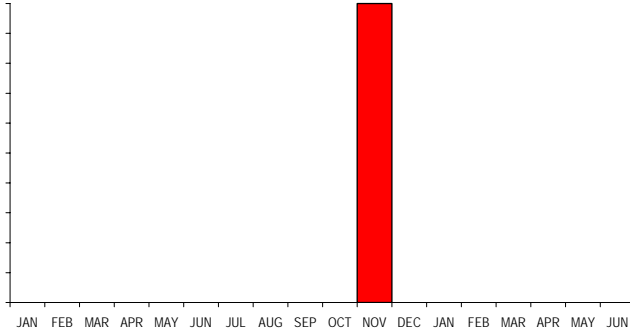
Other Common Names: None known.
Other Scientific Names: None.

1 Record

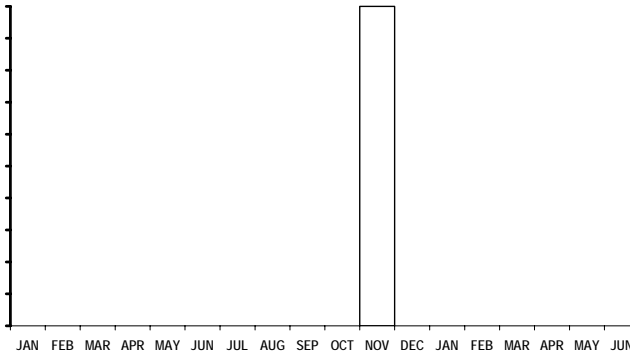
Population (1 record): 0% Common, 0% Frequent, 100% Rare.

Dispersion (0 records).

Flowering (1 record in Nov): Flowering from Nov; Buds, Peak Flowering, Over, Fruit and Nothing not recorded. Peak levels extremely unreliable at 100% in Nov. Historically recorded as flowering from Aug to Oct.



Growth (1 record in Nov): Much and Rare not recorded; None from Nov 100. Peak levels unknown.



Seedlings (1 record): All without any seedlings present.

Fire Survival : No data.

Age to first flowering: No data.

Height (1 record): 100% 0-0.2 m tall.

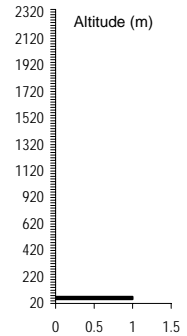
Pollinators (1 record): 100% beetles.

Detailed Pollinators: No additional data.

Habitat:

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

Altitude (1 record): 40 - 60 m; 40_{lq} - 60_{med} - 60_{uq}m.



Landform (1 record): 100% deep soil.

Slope (1 record): 100% platform.

Aspect (0 records).

Soil Type (1 record): 100% sandy.

Soil Colour (1 record): 100% brown.

Geology (1 record): 100% Tertiary sands.

Vegetation (1 record): 100% shrubland.

Conservation Status and Threat:

Red Data List Status: Critically Endangered

A2c, B1a(i,ii)b(i,ii,iii,iv,v)c(iv)+

2a(i,ii)b(i,ii,iii,iv,v)c(iv), C1+2a(i,ii)b, D.

Occurrence (Fynbos): 1 km² with 0% conserved and 100% lost; **Occupancy**: 3 km² with 11% conserved and 100% lost. **Fragmentation index** meaningless.

Nature Reserves (1 record): 0% in nature reserves - unconserved.

Habitat destruction (1 record): 100% islands.

Alien Invasive Species (1 record): 100% Myrtaceae.

Alien Density (1 record): 100% sparse.

Cultivation & Utilization:

Picking (1 record): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes: None.

Confusing Species: None noted, but see below.

Variation and Taxonomy: Although distinct, this species has been lumped with *S. "ontongskopensis"*, which is a totally different beast.

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SEFURC_m.jpg" *

MERGEFORMAT \d

Serruria linearis Salisb. ex Kn.
Needle-leaf Spiderhead
Grasspinnekopbos

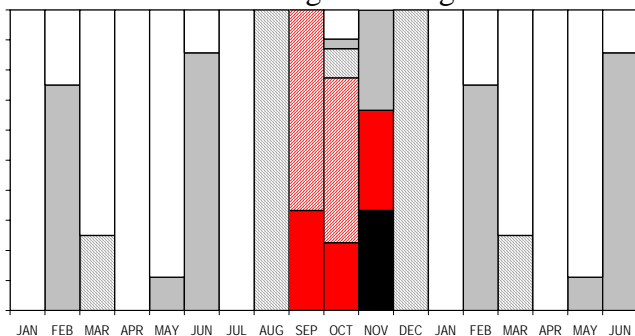
Other Common Names: Linear-leaf Serruria.
Other Scientific Names: *plumigera* (Thunb) 1818, *simplicifolia* R.Br. 1810.

91 Records

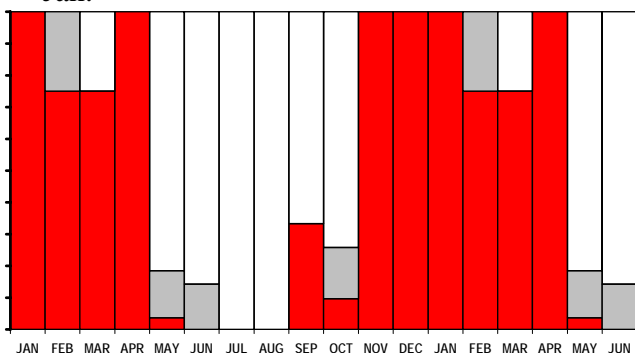
Population (90 records): 17% Common, 42% Frequent, 41% Rare.

Dispersion (75 records): 76% variable, 16% clumped, 5% evenly distributed, 3% widespread.

Flowering (91 records with: Jan 3, Feb 8, Mar 4, Apr 1, May 27, Jun 7, Jul 1, Aug 2, Sep 3, Oct 31, Nov 3, Dec 1): Buds from Sep to Oct; Flowering from Sep to Nov; Peak Flowering from Nov; Over from Mar, Aug and Dec; Fruit from Feb, Jun and Nov; Nothing from Jan to May. Peak levels at unreliable at 100% in Sep, probably better estimated at 87% in Oct. Historically recorded as flowering from Aug to Nov.



Growth (91 records with: Jan 3, Feb 8, Mar 4, Apr 1, May 27, Jun 7, Jul 1, Aug 2, Sep 3, Oct 31, Nov 3, Dec 1): Much from Nov to Apr and Sep; Rare from Feb; None from Mar to Oct. Peak levels at 100% from Nov to Jan.



Seedlings (40 records): Absent in 95%; more seedlings than prefire adults in 1 case. Seedlings found in Dec.

Fire Survival (9 records): 100% resprouted from underground boles.

Age to first flowering: First flowers recorded at 2 years, 50% estimated at 1-2 years, and 100% recorded at 2 years.



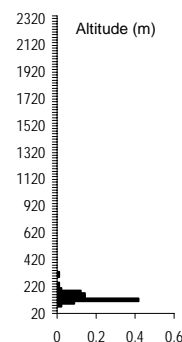
Height (91 records): 3% 0-0.2 m tall, 97% 0.2-1 m tall.

Pollinators (2 records): 50% flies, 50% beetles.
Detailed Pollinators (1 record): Monkey Beetle.

Habitat:

Distance to Ocean (91 records): 100% inland - further than 2 km from coast.

Altitude (91 records): 60 - 320 m; 100_{lq} - 120_{med} - 120_{uq}m.



Landform (91 records): 100% deep soil.

Slope (90 records): 56% platform, 23% gentle incline, 10% valley bottom, 6% dunes, 6% hill top.

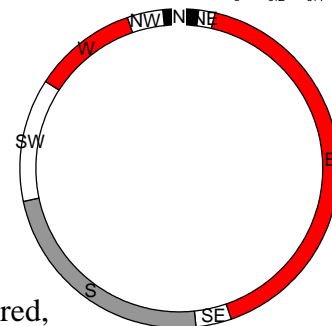
Aspect (56 records): 44% East, 30% South, 20% West, 6% North.

Soil Type (91 records): 96% sandy, 3% loamy, 1% clayey.

Soil Colour (89 records): 27% white, 25% grey, 19% brown, 16% yellow, 8% red, 6% orange.

Geology (86 records): 85% Tertiary sands, 7% sandstone, 6% silcrete or ferricrete, 2% shale.

Vegetation (91 records): 92% shrubland, 7% agricultural lands, 1% thicket.



Conservation Status and Threat:

Red Data List Status: Endangered A4c.

Occurrence (Fynbos): 142 km² with 11% conserved and 42% lost; **Occupancy:** 83 km² with 20% conserved and 47% lost. **Fragmentation index:** 43%.

Nature Reserves (91 records): 44% in nature reserves.

Habitat destruction (89 records): 76% extensive natural habitat, 16% islands, 4% naturally linear habitats, 1% road verges, 1% corridors, 1% naturally fragmented habitats.

Alien Invasive Species (89 records):
96% Fabaceae (chiefly alien *Acacia*),
3% none, 1% *Pinus*.

Alien Density (89 records): 3% alien-free,
51% sparse, 26% abundant, 18% dense,
2% impenetrable.

Cultivation & Utilization:

Picking (72 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

Heavily grazed (ASP94072103);
Growing in amongst the Acacias - large
population (ADA92081802);

Geology mostly shale - proteas were on plumes
of Tertiary sand (SMR99112401);

Confusing Species: Mistaken for *S. furcellata*
which does not have linear terminal leaves..

Records of identification queries = 3.

Records of corrected identification queries = 1. .

Variation and Taxonomy: No variation noted.

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SELINE_m.jpg" *

MERGEFORMAT \d

Serruria ontongskopensis nomen nudum (?*diffusa* R. Br. 1810)
Ontongskop Spiderhead

Other Common Names: None known.

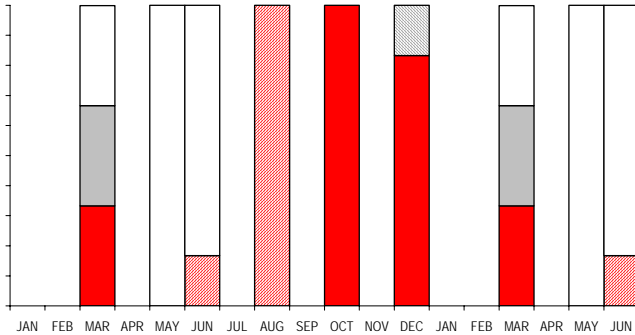
Other Scientific Names: *brownii* (Poir) 1816, *cyanoides* (Thunb) 1781, *diffusa* R. Br. 1810, *glomeratum* L. ex Meisn. 1856, *scariosa* Drege ex Meisn. 1856.

29 Records

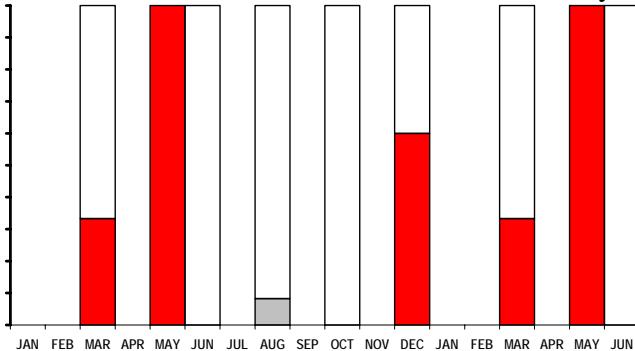
Population (29 records): 0% Common, 41% Frequent, 59% Rare.

Dispersion (23 records): 78% clumped, 22% variable.

Flowering (29 records with: Jan 0, Feb 0, Mar 3, Apr 0, May 1, Jun 6, Jul 0, Aug 12, Sep 0, Oct 1, Nov 0, Dec 6): Buds from Aug; Flowering from Oct to Mar; Peak Flowering not recorded; Over not significant; Fruit from Mar; Nothing from Mar to Jun. Peak levels at unreliable 100% in Oct. Historically not recorded.



Growth (28 records with: Jan 0, Feb 0, Mar 3, Apr 0, May 1, Jun 6, Jul 0, Aug 12, Sep 0, Oct 1, Nov 0, Dec 5): Much from Dec to May; Rare not significant; None from Jun to Mar. Peak levels unreliable at 100% in May.



Seedlings (13 records): Absent in 85%; more seedlings than prefire adults in 1 case. Seedlings found in Dec.

Fire Survival (4 records): 100% resprouted from underground boles.

Age to first flowering: First flowers recorded at 5 years, 50% estimated at 3-4 years, and 100% recorded at 5 years.



Height (29 records): 28% 0-0.2 m tall, 72% 0.2-1 m tall.

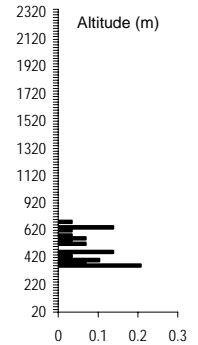
Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

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

Altitude (29 records): 340 - 680 m; 360_{iq} - 440_{med} - 520_{uq}m.



Landform (29 records): 97% deep soil, 3% shallow soil.

Slope (29 records): 45% gentle incline, 28% platform, 17% hill top, 10% steep incline.

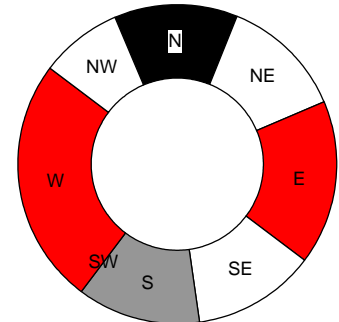
Aspect (24 records): 31% East, 29% West, 21% North, 19% South.

Soil Type (29 records): 59% sandy, 21% gravelly, 10% clayey, 7% loamy, 3% rocky.

Soil Colour (28 records): 36% grey, 32% brown, 21% white, 4% yellow, 4% orange, 4% red.

Geology (29 records): 79% sandstone, 21% shale.

Vegetation (29 records): 100% shrubland.



Conservation Status and Threat:

Red Data List Status: Vulnerable C2a(i), D. Occurrence (Fynbos): 31 km² with 32% conserved and 18% lost; Occupancy: 29 km² with 40% conserved and 9% lost. Fragmentation index: 88%.

Nature Reserves (29 records): 55% in nature reserves - well conserved.

Habitat destruction (29 records): 100% extensive natural habitat.

Alien Invasive Species (29 records): 59% *Pinus*, 31% none, 10% *Hakea*.

Alien Density (29 records): 31% alien-free, 69% sparse.

Cultivation & Utilization:

Picking (27 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Witch's Broom Infestation: 1 record (3%).

Atlassers Notes:

About 80 plants (NAH96081003);
About 75 plants counted one of which had
about 150 flowerheads (SHR95121701);
Fasciation in liner bands with dense outgrowths
of leaves - Witches Broom?
(AGR96081010);

Confusing Species: Identified initially by John
Rourke as *S. furcellata* and in the herbarium
as *S. gracilis*, but differing from the former
in having linear terminal leaves and quite
different involucre bracts, and from the

latter in being an erect resprouter, not a
creeping mat.
Records of identification queries = 29.

Variation and Taxonomy: This is a new
species somewhat intermediate between *S.*
furcellata and *S. linearis*, but distinct from
both

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SEONTO_m.jpg" *

MERGEFORMAT \d

Serruria triloba Salisb. ex Kn. 1809
Trident Spiderhead

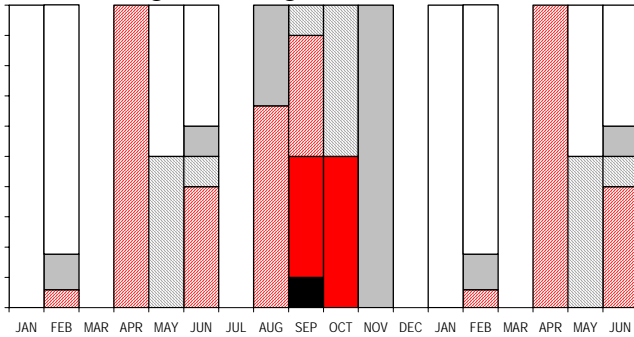
Other Common Names: Sand Serruria, Snake-stem Spiderhead, Three-crested Serruria.
Other Scientific Names: *arenaria* R.Br. 1810, *phylicoides* (Willd.) 1813.

52 Records

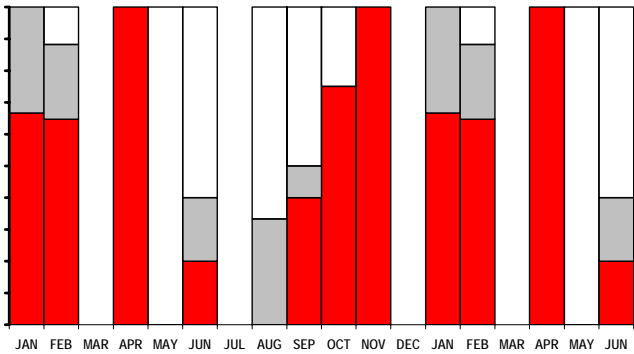
Population (49 records): 8% Common, 45% Frequent, 45% Rare, 2% Extinct.

Dispersion (35 records): 89% variable, 9% clumped, 3% evenly distributed.

Flowering (51 records with: Jan 3, Feb 17, Mar 0, Apr 1, May 2, Jun 10, Jul 0, Aug 3, Sep 10, Oct 4, Nov 1, Dec 0): Buds from Apr 100 to Sep; Flowering from Sep to Oct; Peak Flowering not significant; Over from Oct; Fruit from Aug and Nov; Nothing from Jan to Jun. Peak levels unreliable at 100% from Sep to Oct. Historically recorded as flowering from Aug to Oct.



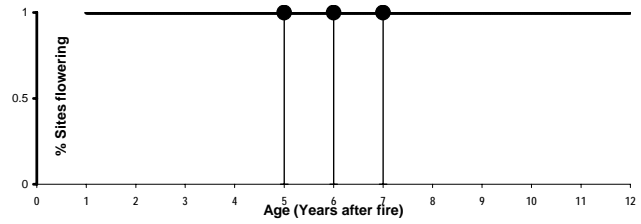
Growth (51 records with: Jan 3, Feb 17, Mar 0, Apr 1, May 2, Jun 10, Jul 0, Aug 3, Sep 10, Oct 4, Nov 1, Dec 0): Much from Sep to Apr; Rare from Jan to and Jun to Aug; None from May to Oct. Peak levels unreliable at 100% in Nov.



Seedlings (23 records): All without any seedlings present.

Fire Survival (9 records): 100% resprouted from underground boles.

Age to first flowering: First flowers recorded at 100% at 5 years, no data from younger veld.



Height (50 records): 10% 0-0.2 m tall, 90% 0.2-1 m tall.

Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

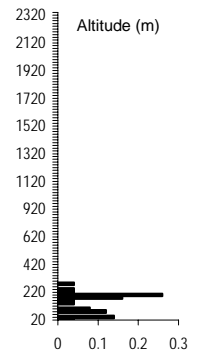
Distance to Ocean (48 records): 100% inland - further than 2 km from coast.

Altitude (48 records): 20 - 280 m; 60_{lq} - 140_{med} - 180_{uq}m.

Landform (48 records): 100% deep soil.

Slope (48 records): 60% gentle incline, 38% platform, 2% hill top.

Aspect (35 records): 77% West, 17% South, 6% East.



Soil Type (48 records): 94% sandy, 6% loamy.

Soil Colour (48 records): 44% grey, 31% white, 13% brown, 6% yellow, 4% orange, 2% red.

Geology (45 records): 67% Tertiary sands, 18% sandstone, 9% shale, 7% granite.

Vegetation (48 records): 98% shrubland, 2% agricultural lands.

Conservation Status and Threat:

Red Data List Status: Critically Endangered A2c.

Occurrence (Fynbos): 177 km² with 1% conserved and 64% lost; Occupancy: 49 km² with 1% conserved and 65% lost.

Fragmentation index: 11%.

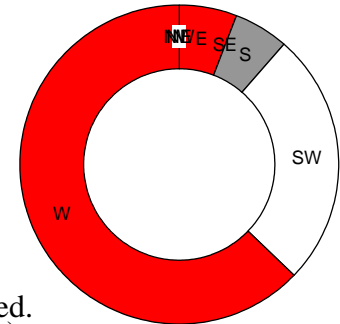
Nature Reserves (48 records): 15% in nature reserves - inadequately conserved.

Habitat destruction (48 records): 52% extensive natural habitat, 42% islands, 4% road verges, 2% corridors.

Alien Invasive Species (47 records): 91% Fabaceae (chiefly alien *Acacia*), 6% none, 2% *Pinus*.

Alien Density (47 records): 6% alien-free, 36% sparse, 36% abundant, 17% dense, 4% impenetrable.

Cultivation & Utilization:



Picking (44 records): 100% no sign of picking.
Cultivation Status: Plantings - 2 records (4%).

Atlassers Notes:

All planted : sources : Se Tril : 6 B K D
(AGR94101202); Planted according to Mr
Dalton Gibbs of Rondevlei Reserve –
previously known in Grassy Park area. These
plants are less than 1 year old
(WIJ95010601);

Confusing Species: Misidentified with *S.*
aemua, which is single-stemmed.

Records of identification queries = 4.

Records of corrected identification queries = 1.

Variation and Taxonomy: No variation noted.

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SETRIL_m.jpg" *

MERGEFORMAT \d

Serruria gracilis Salisb. ex Kn. 1809
Fine Spiderhead

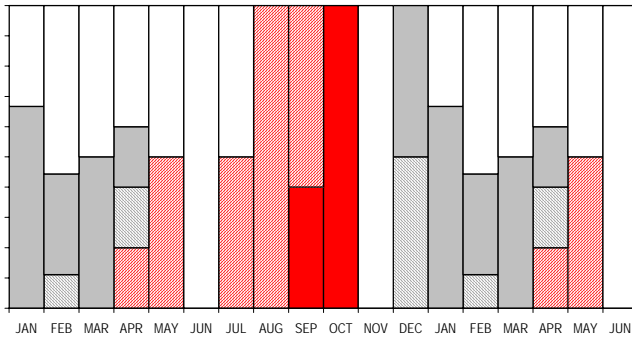
Other Common Names: None known.
Other Scientific Names: *pinnata* (Andr.) 1803,
pinnata var *longifolia* Meisn. 1856.

41 Records

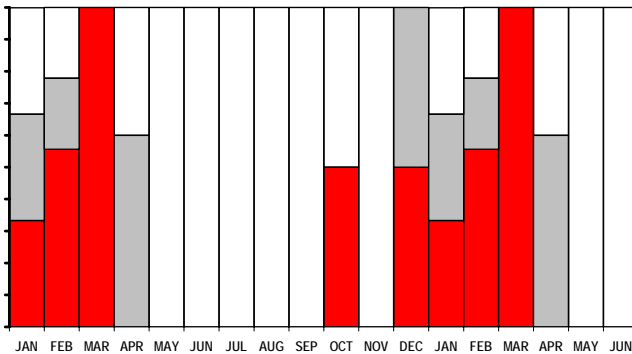
Population (35 records): 9% Common, 66% Frequent, 26% Rare.

Dispersion (32 records): 69% clumped, 31% variable.

Flowering (41 records with: Jan 6, Feb 9, Mar 2, Apr 5, May 2, Jun 1, Jul 2, Aug 4, Sep 5, Oct 2, Nov 1, Dec 2): Buds from Apr to Sep; Flowering from Sep to Oct; Peak Flowering not recorded; Over from Apr and Dec; Fruit from Dec to Apr; Nothing from Jan to Jul and Nov. Peak levels unreliable at 100% in Oct. Historically recorded as flowering from Jul to Oct.



Growth (40 records with: Jan 6, Feb 9, Mar 2, Apr 5, May 2, Jun 1, Jul 2, Aug 4, Sep 4, Oct 2, Nov 1, Dec 2): Much from Oct to Mar; Rare from Dec to Feb and Apr; None from Jan to Feb and Apr to Nov. Peak levels unreliable at 100% in Mar.



Seedlings (8 records): Absent in 75%; fewer seedlings than prefire adults in 1 case. Seedlings found in Apr.

Fire Survival : No data.

Age to first flowering: First flowers recorded at 8 years, 50% estimated at 6-7 years, and 100% recorded at 8 years.



Height (38 records): 97% 0-0.2 m tall, 3% 0.2-1 m tall.

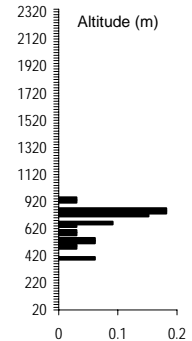
Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

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

Altitude (33 records): 380 - 840 m; 560_{lq} - 720_{med} - 720_{uq} m.



Landform (33 records): 94% deep soil, 6% shallow soil.

Slope (33 records): 45% gentle incline, 42% steep incline, 9% hill top, 3% platform.

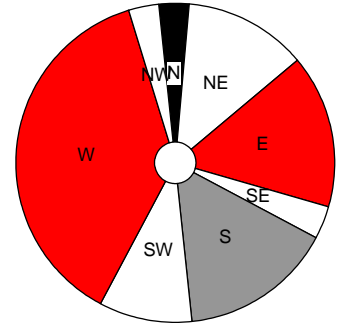
Aspect (32 records): 42% West, 23% East, 22% South, 13% North.

Soil Type (32 records): 53% loamy, 22% sandy, 16% gravelly, 6% clayey, 3% rocky.

Soil Colour (32 records): 75% brown, 19% grey, 3% yellow, 3% orange.

Geology (31 records): 55% granite, 39% sandstone, 6% shale.

Vegetation (33 records): 97% shrubland, 3% thicket.



Conservation Status and Threat:

Red Data List Status: Vulnerable B1a(ii)b(i,ii,iii,iv,v)+2a(ii)b(i,ii,iii,iv,v).

Occurrence (Fynbos): 184 km² with 56% conserved and 20% lost; **Occupancy:** 26 km² with 41% conserved and 15% lost. **Fragmentation index:** 13%.

Nature Reserves (33 records): 45% in nature reserves.

Habitat destruction (33 records): 94% extensive natural habitat, 3% road verges, 3% naturally fragmented habitats.

Alien Invasive Species (33 records): 64% *Pinus*, 21% Fabaceae (chiefly alien *Acacia*), 9% none, 6% *Hakea*.

Alien Density (33 records): 9% alien-free, 70% sparse, 15% abundant, 6% dense.

Cultivation & Utilization:**Picking** (31 records): 100% no sign of picking.**Cultivation Status:** No noted cultivation.**Atlassers Notes:** None.**Confusing Species:** Misidentified as *S. cygnea* when not in flower.

Records of identification queries = 12.

Records of corrected identification queries = 1.

Variation and Taxonomy: Previously considered as synonymous with *S. pinnata*, but the growth habits and sizes are quite distinct, although might be argued to be subspecies.**Distribution:** Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SEGRAC_m.jpg" *

MERGEFORMAT \d

Serruria pinnata R.Br. 1810
Graceful Spiderhead

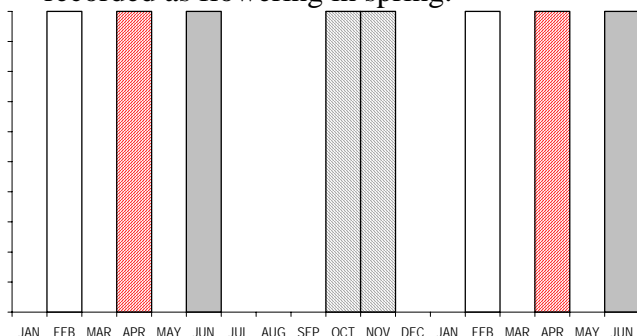
Other Common Names: Slender Serruria.
Other Scientific Names: None.

8 Records

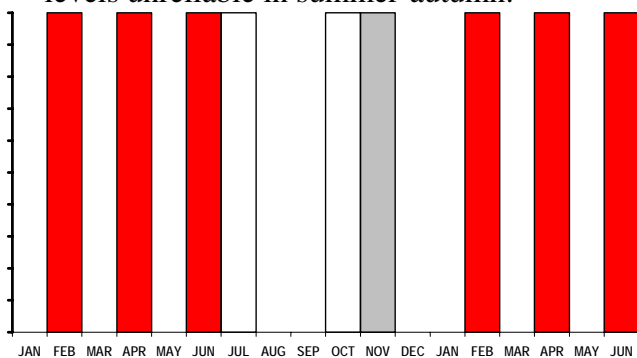
Population (8 records): 0% Common, 0% Frequent, 88% Rare, 13% Extinct.

Dispersion (5 records): 80% clumped, 20% variable.

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



Growth (7 records with: Jan 0, Feb 2, Mar 0, Apr 1, May 0, Jun 1, Jul 1, Aug 0, Sep 0, Oct 1, Nov 1, Dec 0): Much from Feb to Jun; Rare from Nov; None from Jul to Oct. Peak levels unreliable in summer-autumn.



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

Fire Survival : No data.

Age to first flowering: First flowers recorded at 21 years, no data from younger veld

Height (7 records): 71% 0-0.2 m tall, 29% 0.2-1 m tall.

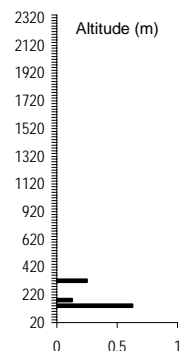
Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

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

Altitude (8 records): 120 - 320 m; 120_{lq} - 140_{med} - 140_{uq}m.



Landform (8 records): 100% deep soil.

Slope (8 records): 75% gentle incline, 25% platform.

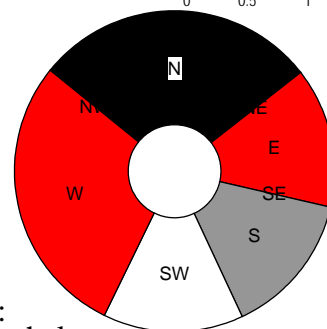
Aspect (7 records): 36% West, 29% North, 21% South, 14% East.

Soil Type (8 records): 75% loamy, 13% sandy, 13% gravelly.

Soil Colour (8 records): 63% brown, 38% grey.

Geology (8 records): 63% granite, 25% shale, 13% sandstone.

Vegetation (8 records): 88% shrubland, 13% grassland.



Conservation Status and Threat:

Red Data List Status: Critically Endangered C2a(i)b, D.

Occurrence (Fynbos): 4 km² with 6% conserved and 58% lost; **Occupancy**: 9 km² with 3% conserved and 74% lost. **Fragmentation index**: 90%.

Nature Reserves (8 records): 63% in nature reserves - well conserved.

Habitat destruction (8 records): 63% islands, 25% extensive natural habitat, 13% patches.

Alien Invasive Species (8 records): 63% Fabaceae (chiefly alien *Acacia*), 25% *Pinus*, 13% Myrtaceae.

Alien Density (8 records): 100% sparse.

Cultivation & Utilization:

Picking (7 records): 100% no sign of picking.
Cultivation Status: No noted cultivation.

Atlassers Notes:

Some in flower the outer petals were bent back and orange coloured - looked like pollen on anthers (SMRY1101808);

In 2 clumps - by dam NE of entrance and S of island south dam (AGR96041104); Could not be found at this site even though AGR96041104 and LYM97111901 recorded this species here. the site burnt in January 2000 and although is recovering reasonably well no *S. pinnata* could be found after a 4 hour search (NGFY1011301);

Height barely 2 - plants swamped by tall undergrowth: there may be more but we did

spend quite a while looking
(SMRY1101808);
Has a rootstock and prefers sandier areas
(NGFY1022703);

Confusing Species: Originally atlassed as *S. gracilis*, until both species had been atlassed and the differences noted.

Records of identification queries = 3.

Records of corrected identification queries = 2.

Variation and Taxonomy: Closely related to *S. gracilis* and perhaps a subspecies, but

clearly requiring some taxonomic status. However, unlike *S. gracilis* which is delicate and forms a mat, *S. pinnata* occurs more as “ropes” on the ground, and is much more robust. The outer petals mimicking anthers is quite distinctive.

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SEPINN_m.jpg" *

MERGEFORMAT \d

Serruria stellata Rourke 1991 Star Spiderhead

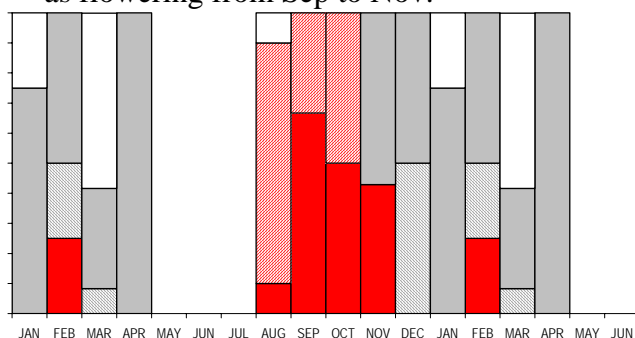
Other Common Names: None known.
Other Scientific Names: None.

63 Records

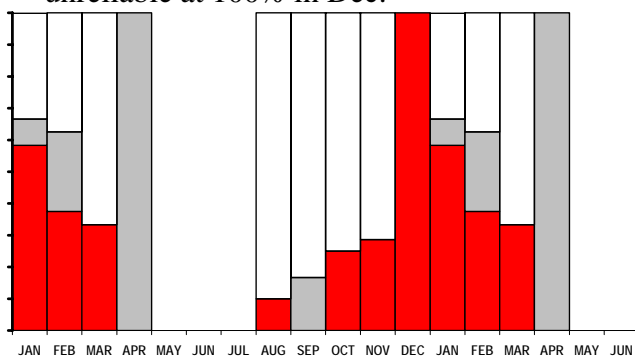
Population (62 records): 6% Common, 45% Frequent, 48% Rare.

Dispersion (49 records): 51% clumped, 47% variable, 2% widespread.

Flowering (62 records with: Jan 12, Feb 8, Mar 12, Apr 1, May 0, Jun 0, Jul 0, Aug 10, Sep 6, Oct 4, Nov 7, Dec 2): Buds from Aug to Oct; Flowering from Feb and Sep to Nov; Peak Flowering not recorded; Over from Feb and Dec; Fruit from Nov to Apr; Nothing from Jan and Mar. Peak levels unreliable at 100% from Sep to Oct. Historically recorded as flowering from Sep to Nov.



Growth (62 records with: Jan 12, Feb 8, Mar 12, Apr 1, May 0, Jun 0, Jul 0, Aug 10, Sep 6, Oct 4, Nov 7, Dec 2): Much from Oct to Mar; Rare from Feb and Apr; None from Jan to Mar and Aug to Nov. Peak levels unreliable at 100% in Dec.



Seedlings (32 records): All without any seedlings present.

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

Age to first flowering: First flowers recorded at 4 years, 50% estimated at 3 years, and 100% recorded at 5 years.



Height (63 records): 56% 0-0.2 m tall, 44% 0.2-1 m tall.

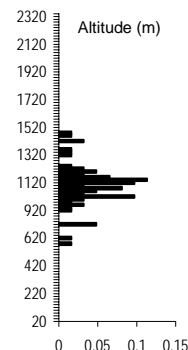
Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

Distance to Ocean (62 records): 100% inland - further than 2 km from coast.

Altitude (62 records): 560 - 1380 m; 900_{lq} - 980_{med} - 1020_{uq} m.



Landform (62 records): 85% deep soil, 11% shallow soil, 3% rocky outcrops.

Slope (61 records): 57% gentle incline, 31% steep incline, 8% platform, 3% hill top.

Aspect (58 records): 51% North, 23% East, 15% West, 11% South.

Soil Type

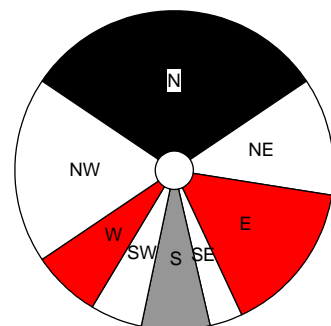
(61 records): 52% sandy, 20% loamy, 18% gravelly, 7% clayey, 3% rocky.

Soil Colour

(62 records): 55% grey, 34% brown, 5% orange, 3% white, 3% yellow.

Geology (61 records): 69% sandstone, 31% shale.

Vegetation (61 records): 98% shrubland, 2% grassland.



Conservation Status and Threat:

Red Data List Status: Vulnerable D2(ii).

Occurrence (Fynbos): 218 km² with 49% conserved and 1% lost; Occupancy: 46 km² with 19% conserved and 0% lost. Fragmentation index: 17%.

Nature Reserves (62 records): 11% in nature reserves - inadequately conserved.

Habitat destruction (61 records): 93% extensive natural habitat, 2% islands, 2% corridors, 2% naturally linear habitats, 2% naturally fragmented habitats.

Alien Invasive Species

(62 records): 68% *Hakea*, 23% none, 10% *Pinus*.

Alien Density (62 records): 23% alien-free, 71% sparse, 5% abundant, 2% dense.

Cultivation & Utilization:

Picking (48 records): 100% no sign of picking.
Cultivation Status: No noted cultivation.

Atlassers Notes: None.

Confusing Species: One instance of atlassed as
“creeping *S. phylloides*”.
Records of identification queries = 4.
Records of corrected identification queries = 1.

Variation and Taxonomy: No variation noted.

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SESTEL_m.jpg" *

MERGEFORMAT \d

Serruria florida (Thunb.) Salisb. ex Kn. 1781, 1809

Blushing Bride

Trots van Franshoek

Other Common Names: Florid Serruria, Pride of Franschoek, *Bergbruidjie*, *Bruidsblom*, *Skaambloom*.

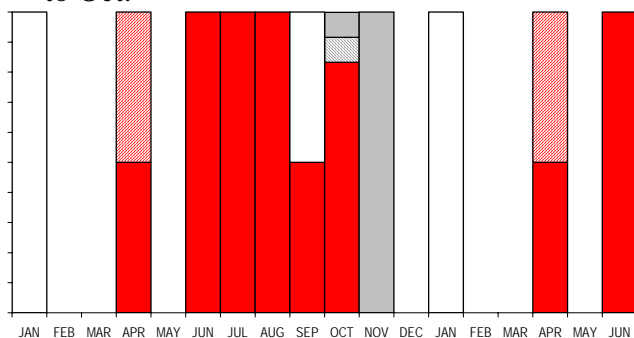
Other Scientific Names: None.

32 Records

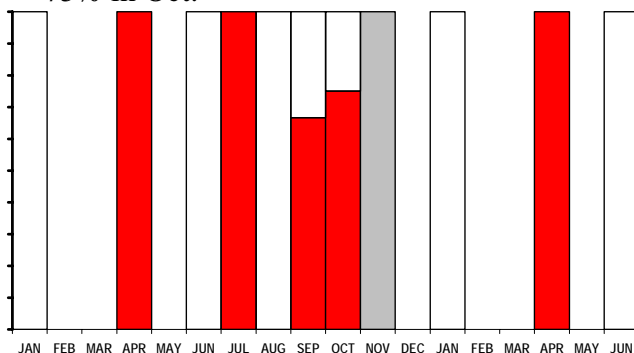
Population (18 records): 6% Common, 67% Frequent, 28% Rare.

Dispersion (16 records): 63% clumped, 38% variable.

Flowering (30 records with: Jan 1, Feb 0, Mar 0, Apr 2, May 0, Jun 4, Jul 1, Aug 3, Sep 6, Oct 12, Nov 1, Dec 0): Buds from Apr; Flowering from Apr to Oct; Peak Flowering not recorded; Over not significant; Fruit from Nov; Nothing from Jan and Sep. Peak levels unreliable at 100% from Jul to Aug. Historically recorded as flowering from Jul to Oct.



Growth (29 records with: Jan 1, Feb 0, Mar 0, Apr 1, May 0, Jun 4, Jul 1, Aug 3, Sep 6, Oct 12, Nov 1, Dec 0): Much from Apr, Jul and Sep to Oct; Rare from Nov; None from Jan, Jun and Aug to Oct. Peak levels unreliable at 100% from Apr and Jul, more reliably at 75% in Oct.



Seedlings (14 records): All without any seedlings present.

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

Age to first flowering: First flowers recorded at 2 years, 50% estimated at 2 years, and 100% recorded at 3 years.



Height (29 records): 3% 0-0.2 m tall, 28% 0.2-1 m tall, 69% 1-2 m tall.

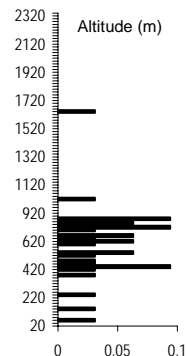
Pollinators (4 records): 50% bees or wasps, 50% beetles.

Detailed Pollinators (3 records): Solitary Bee, Monkey Beetle, Honey Bee.

Habitat:

Distance to Ocean (18 records): 100% inland - further than 2 km from coast.

Altitude (18 records): 360 - 760 m; 440 *lq* - 540 *med* - 640 *uq*m.



Landform (18 records): 94% deep soil, 6% shallow soil.

Slope (18 records): 50% steep incline, 50% gentle incline.

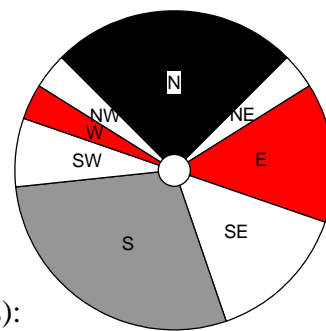
Aspect (18 records): 56% South, 39% North, 6% West.

Soil Type (18 records): 50% loamy, 44% sandy, 6% peaty.

Soil Colour (18 records): 61% grey, 28% brown, 11% black.

Geology (18 records): 67% sandstone, 22% granite, 11% shale.

Vegetation (18 records): 94% shrubland, 6% plantations.



Conservation Status and Threat:

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

Occurrence (Fynbos): 8 km² with 91% conserved and 1% lost; Occupancy: 14 km² with 95% conserved and 0% lost. Fragmentation index meaningless.

Nature Reserves (18 records): 67% in nature reserves - well conserved.

Habitat destruction (18 records): 89% extensive natural habitat, 11% naturally linear habitats.

Alien Invasive Species (18 records): 61% *Pinus*, 22% *Hakea*, 17% none.

Alien Density (18 records): 17% alien-free, 61% sparse, 11% abundant, 11% dense.

Cultivation & Utilization:

Picking (22 records): 91% no sign of picking, 5% lightly picked, 5% severely picked.

Cultivation Status: Plantings - 14 records (44%).

Atlassers Notes:

The plants caught in the fire were over a metre high (MAJ92071601);

One plant about 0.5 m was seen in flower in the few years old veld - a few other plants were seen with no flowers (MAJ92071601);

Within the 2 veld ages were 2 patches of old veld that escaped both fires and had the 5 plants recorded on this site - whew! (MAJ92071601);

One of the plants had recently been picked! (MAJ92071601)!;

Plants found By Fiona Powrie - 1 escapee in full flower, others no flowers - on roadside: none found in plantations per se. Obviously rest of population wiped out by fire (AGRY0090305);

Confusing Species: None.

Variation and Taxonomy: No variation noted.

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SEFLOR_m.jpg" *

MERGEFORMAT \d

Serruria heterophylla Meisn. 1856

Spindly Spiderhead

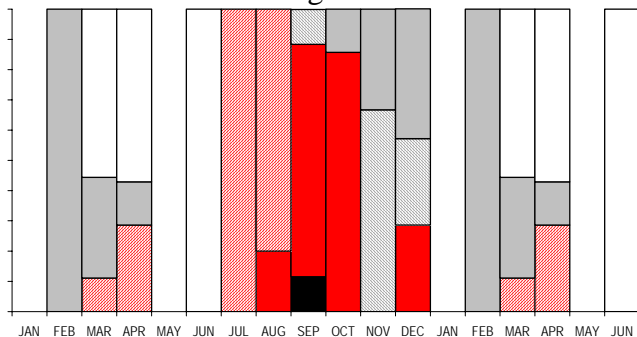
Other Common Names: None known.
Other Scientific Names: *aemua* var. *heterophylla* Hutch. 1912.

84 Records

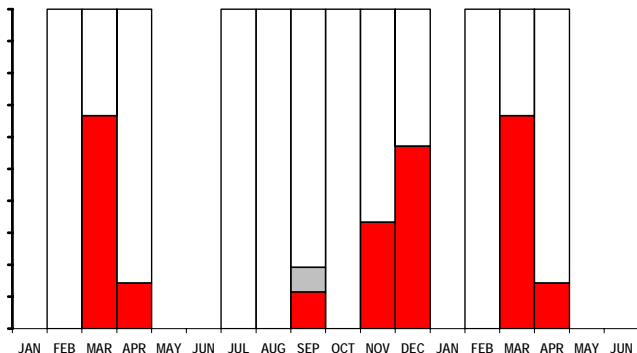
Population (83 records): 19% Common, 65% Frequent, 16% Rare.

Dispersion (78 records): 58% variable, 37% clumped, 4% widespread, 1% evenly distributed.

Flowering (83 records with: Jan 0, Feb 1, Mar 9, Apr 7, May 0, Jun 1, Jul 7, Aug 15, Sep 26, Oct 7, Nov 3, Dec 7): Buds from Apr and Jul to Aug; Flowering from Aug 20 to Oct and Dec; Peak Flowering from not significant; Over from Nov to Dec; Fruit from Nov to Mar; Nothing from Mar to Jun. Peak levels at 100% in Sep. Historically recorded as flowering from Jul to Oct.



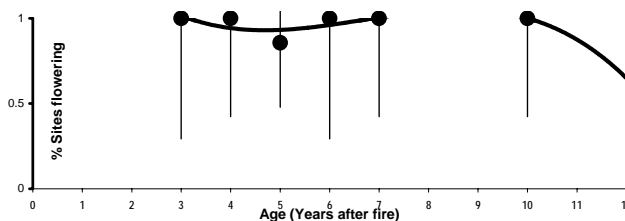
Growth (82 records with: Jan 0, Feb 1, Mar 9, Apr 7, May 0, Jun 0, Jul 7, Aug 15, Sep 26, Oct 7, Nov 3, Dec 7): Much from Mar and Nov to Dec; Rare not significant; None from all year round. Peak levels unreliable at 67% in Mar.



Seedlings (41 records): All without any seedlings present.

Fire Survival (5 records): 100% survived by seedlings only.

Age to first flowering: First flowers recorded at 3 years, 50% estimated at 1-2 years, and 100% recorded at 3 years.



Height (83 records): 12% 0-0.2 m tall, 86% 0.2-1 m tall, 2% 1-2 m tall.

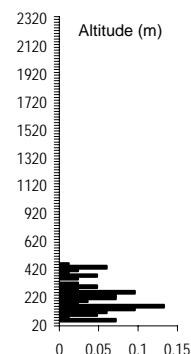
Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

Distance to Ocean (83 records): 63% coastal - less than 2 km from coast.

Altitude (83 records): 40 - 460 m; 120_{lq} - 160_{med} - 220_{uq}m.



Landform (83 records): 81% deep soil, 10% rocky outcrops, 10% shallow soil.

Slope (83 records): 53% gentle incline, 45% steep incline, 1% hill top, 1% platform.

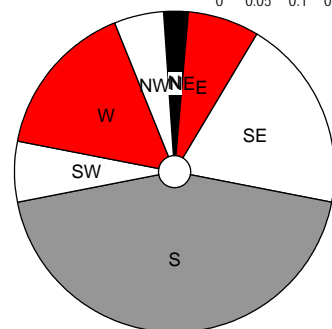
Aspect (82 records): 60% South, 21% West, 13% East, 5% North.

Soil Type (83 records): 54% sandy, 20% loamy, 12% clayey, 6% gravelly, 5% rocky, 2% peaty.

Soil Colour (82 records): 57% grey, 27% brown, 7% orange, 5% black, 2% white, 1% red.

Geology (83 records): 73% sandstone, 19% shale, 5% conglomerate, 2% silcrete or ferricrete.

Vegetation (83 records): 100% shrubland.



Conservation Status and Threat:

Red Data List Status: Endangered B2a(ii)b(ii,iii,v).

Occurrence (Fynbos): 75 km² with 12% conserved and 34% lost; Occupancy: 43km² with 30% conserved and 22% lost. Fragmentation index: 41%.

Nature Reserves (83 records): 45% in nature reserves.

Habitat destruction (83 records): 96% extensive natural habitat, 2% naturally linear habitats, 1% road verges.

Alien Invasive Species (81 records): 46% none, 22% *Pinus*, 15% Fabaceae (chiefly alien *Acacia*), 12% *Hakea*, 5% Myrtaceae.

Alien Density (81 records): 46% alien-free, 48% sparse, 6% abundant.

Cultivation & Utilization:

Picking (52 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

Single stemmed below but definitely linear upper leaves! (AGR94082904); Is not resprouter at this locality (SHR93091204);

Confusing Species: This species is supposed to be a resprouter. However, *S. phyllicoides* also appears to have forms – especially on the Riviersonderend with upper linear leaves: these have been dealt with separately.

Records of identification queries = 38.

Records of corrected identification queries = 32.

Variation and Taxonomy: No variation noted, other than some confusion with the linear-leaf form of *S. phyllicoides*.

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SEHETE_m.jpg" *

MERGEFORMAT \d

Serruria phyllicoides (Bergius) R.Br. 1766, 1810

Bearded Spiderhead

Donsigespinnekopbos

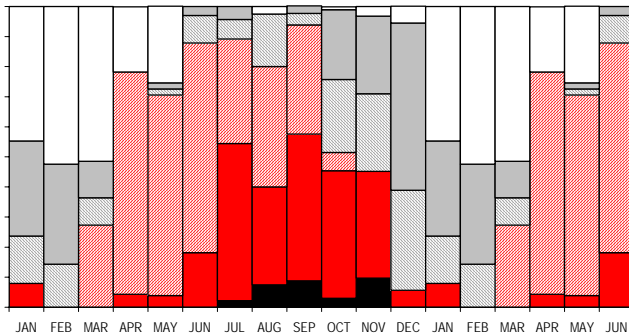
Other Common Names: Bearded Serruria, Downy Spiderhead, Silky Spiderhead.
Other Scientific Names: *abrotaniifolia* (Andr) 1803, *barbigera* Salisb. ex Knight 1809, *eriocephala* Steud 1841, *glomerata* Thib. ex Meisn 1856, *nitida* R. Br. 1810, *parilis* Salisb. ex Knight 1809, *serraria* (Burm ex Meisn) 1856, *squarrosa* R. Br. 1810.

518 Records

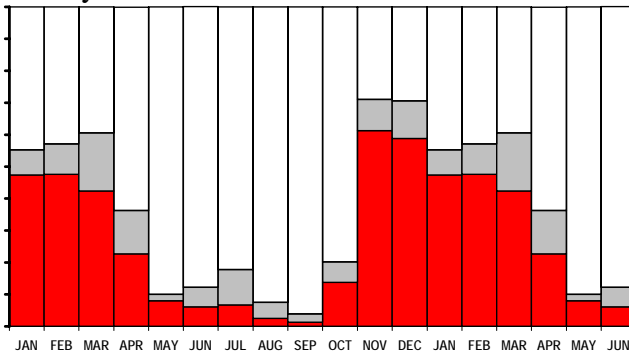
Population (515 records): 0.2% Abundant, 17% Common, 66% Frequent, 17% Rare.

Dispersion (473 records): 65% variable, 27% clumped, 7% widespread, 0.8% evenly distributed.

Flowering (513 records with: Jan 38, Feb 21, Mar 33, Apr 23, May 51, Jun 33, Jul 46, Aug 40, Sep 80, Oct 99, Nov 31, Dec 18): Buds from Mar to Sep; Flowering from Jul to Nov; Peak Flowering not significant; Over from Oct to Dec; Fruit from Oct to Feb; Nothing from Jan to May. Peak levels at 98% in Sep. Historically recorded as flowering from Aug to Nov.



Growth (501 records with: Jan 38, Feb 21, Mar 33, Apr 22, May 50, Jun 33, Jul 45, Aug 40, Sep 77, Oct 94, Nov 31, Dec 17): Much from Nov to Apr; Rare not significant; None from all year round. Peak levels at 71% in Nov.



Seedlings (240 records): Absent in 96%; fewer seedlings than prefire adults in 3 cases, and more in 2 cases. Seedlings found in Feb, Jun, Jul and Oct (2).

Fire Survival (13 records): 69% survived by seedlings only, 31% eliminated from the area by fires.

Age to first flowering: First flowers recorded at 2 years, 50% estimated at 3-4 years, and 100% recorded at 4 years.



Height (515 records): 6% 0-0.2 m tall, 93% 0.2-1 m tall, 1.0% 1-2 m tall.

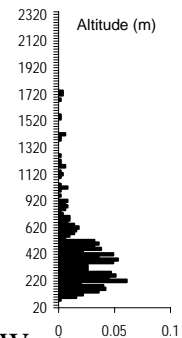
Pollinators (5 records): 80% beetles, 20% bees or wasps.

Detailed Pollinators (3 records): Monkey Beetle (2), Honey Bee.

Habitat:

Distance to Ocean (506 records): 97% inland - further than 2 km from coast.

Altitude (506 records): 60 - 1640 m; 220 *lq* - 340 *med* - 460 *uq* m.



Landform (505 records): 83% deep soil, 14% shallow soil, 2% rocky outcrops, 0.6% swamp, 0.2% riverine.

Slope (505 records): 62% gentle incline, 29% steep incline, 5% hill top, 4% platform.

Aspect (472 records): 35% South, 24% North, 24% West, 16% East.

Soil Type (505 records):

61% sandy, 21% loamy, 9% gravelly, 5% clayey, 3% rocky, 1% peaty.

Soil Colour (504 records):

59% grey, 26% brown, 5% white, 4% orange, 3% black, 3% yellow, 0.4% red.

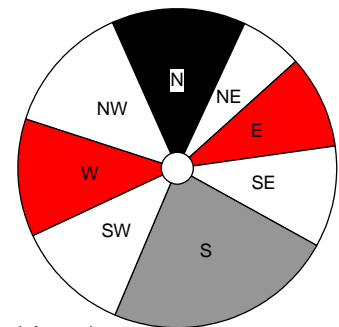
Geology (485 records): 81% sandstone, 15% shale, 2% silcrete or ferricrete, 0.8% granite, 0.4% conglomerate, 0.2% Tertiary sands.

Vegetation (505 records): 97% shrubland, 2% plantations, 0.6% grassland, 0.2% thicket, 0.2% woodland.

Conservation Status and Threat:

Red Data List Status: Least Concern.

Occurrence (Fynbos): 3 288 km² with 33% conserved and 22% lost; **Occupancy:** 489 km² with 40% conserved and 15% lost. **Fragmentation index:** 9%.



Nature Reserves (506 records): 43% in nature reserves.

Habitat destruction (498 records): 93% extensive natural habitat, 5% islands, 0.6% naturally linear habitats, 0.4% road verges, 0.4% corridors, 0.4% naturally fragmented habitats.

Alien Invasive Species (497 records): 53% *Pinus*, 18% *Hakea*, 17% none, 11% Fabaceae (chiefly alien *Acacia*), 2% Myrtaceae, 0.2% annual alien grasses.

Alien Density (496 records): 17% alien-free, 63% sparse, 16% abundant, 5% dense.

Cultivation & Utilization:

Picking (362 records): 100% no sign of picking, 0.3% lightly picked.

Cultivation Status: No noted cultivation.

Witch's Broom Infestation: 1 record (0.2%).

Atlassers Notes:

Flowers were mainly over but there were some buds and many flowers still had vertical centres - like Cornflowers (CHE96081503);

Quite unusual head tight with broader than usual but fewer basal bracts a very robust head - plant very densely leaved - an interesting variant (NAHY1011102); High Altitude Form (SHR97091409);

Site deep ripped – obviously likes it - lots of young (ASP92092208); Bulldozed for new tar road (PAP92060803);

One plant has fasciation like Witches Broom - (ASP92092005)

Confusing Species: Confused with *S. rostellaris* (which has inconspicuous basal bracts), *S. acrocarpa* (when not in flower) and *S. barbiger* (a totally different plant – probably in error for *Serruria barbiger*).

Records of identification queries = 36.

Records of corrected identification queries = 4.

Variation and Taxonomy: There is a clear altitudinal variation, with **lower altitude XX and higher altitude XX**. A form from Stettynsberg probably also requires recognition: it is a smaller plant with much smaller leaves and bigger than normal involucral bracts, suggesting an affinity to *S. rosea*.

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SEPHYL_m.jpg" *

MERGEFORMAT \d

Serruria phyllicoides rosea/heter form

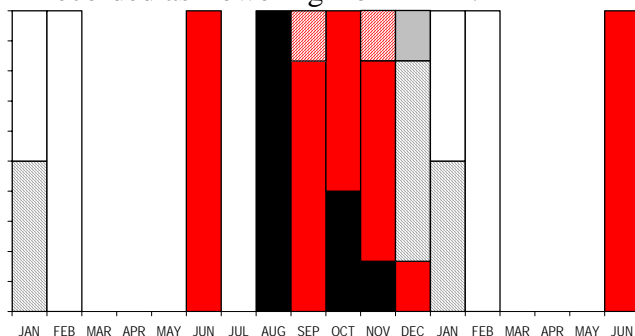
Other Common Names: None known.
Other Scientific Names: *None*.

30 Records

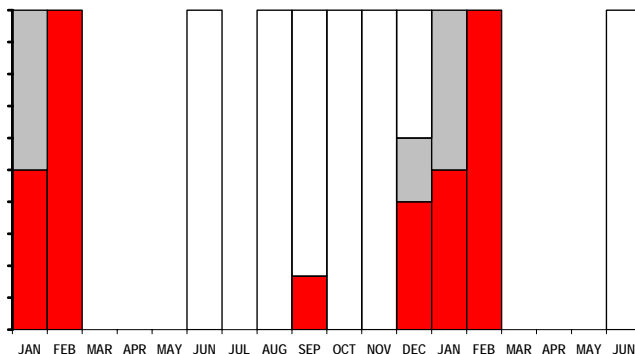
Population (30 records): 17% Common, 50% Frequent, 33% Rare.

Dispersion (28 records): 64% clumped, 29% variable, 7% widespread.

Flowering (30 records with: Jan 2, Feb 3, Mar 0, Apr 0, May 0, Jun 1, Jul 0, Aug 1, Sep 6, Oct 5, Nov 6, Dec 6): Buds not significant; Flowering from Jun and Sep to Nov; Peak Flowering from Aug and Oct; Over from Dec to Jan; Fruit not significant; Nothing from Jan to Feb. Peak levels unreliable at 100% from Aug to Nov. Historically recorded as flowering from XXX.



Growth (28 records with: Jan 2, Feb 3, Mar 0, Apr 0, May 0, Jun 1, Jul 0, Aug 1, Sep 6, Oct 4, Nov 6, Dec 5): Much from Dec to Feb; Rare from Dec to Jan; None from Jun to Dec. Peak levels unreliable at 100% in Feb.



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

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

Age to first flowering: First flowers recorded at 100% at 6 years, no data from younger veld.



Height (30 records): 80% 0.2-1 m tall, 20% 1-2 m tall.

Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

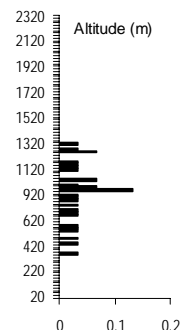
Distance to Ocean (30 records): 100% inland - further than 2 km from coast.

Altitude (30 records): 340 - 1220 m; 660_{lq} - 860_{med} - 880_{uq}m.

Landform (30 records): 73% deep soil, 17% shallow soil, 10% rocky outcrops.

Slope (30 records): 53% steep incline, 43% gentle incline, 3% platform.

Aspect (30 records): 75% South, 18% East, 3% North, 3% West.



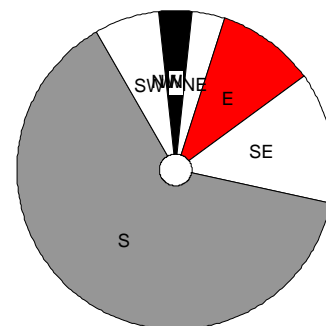
Soil Type (30 records):

37% sandy, 23% peaty, 20% gravelly, 10% loamy, 7% clayey, 3% rocky.

Soil Colour (29 records): 45% grey, 31% black, 21% brown, 3% orange.

Geology (30 records): 83% sandstone, 17% shale.

Vegetation (30 records): 87% shrubland, 7% thicket, 3% grassland, 3% plantations.



Conservation Status and Threat:

Red Data List Status: Not Evaluated.

Data Not available: Occurrence (Fynbos): km2 with % conserved and % lost; Occupancy: km2 with % conserved and % lost. Fragmentation index: %.

Nature Reserves (30 records): 63% in nature reserves - well conserved.

Habitat destruction (30 records): 87% extensive natural habitat, 7% islands, 3% road verges, 3% naturally linear habitats.

Alien Invasive Species (30 records):

67% *Pinus*, 27% none, 7% *Hakea*.

Alien Density (30 records): 27% alien-free, 57% sparse, 10% abundant, 3% dense, 3% impenetrable.

Cultivation & Utilization:

Picking (23 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

This very interesting range extension was made in the company of Dr Rourke who has a herbarium specimen of this - about 80 plants in 2 small discrete populations (NAH98110501);

Confusing Species: See variation and taxonomy. This is a very sparsely branched

form of *S. phylloides*, with linear terminal leaves, thus superficially resembling *S. heterophylla*. It has been atlassed as both, but with notes by atlasers as to its differences, and also as *S. rosea*.

Records of identification queries = 30.

Records of corrected identification queries = 30.

Variation and Taxonomy: Although not a resprouter this form is far too erect and robust for *S. phylloides* and has very

reduced leaves like *S. heterophylla*. It is probably a new species, but as part of the *S. phylloides* complex.

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SEPHYLR_m.jpg" *

MERGEFORMAT \d

Serruria rosea Phill.
Rose Spiderhead
Stroomeisie

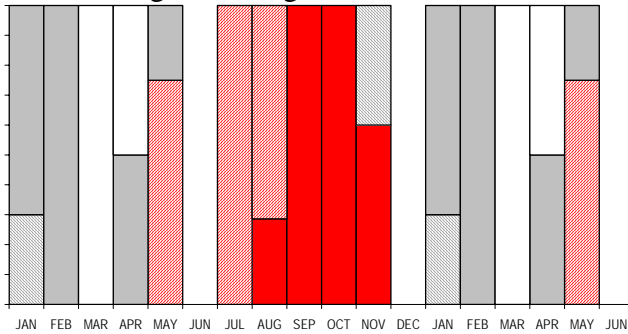
Other Common Names: Bridesmaid Spiderhead, *Bruidsbos*.
Other Scientific Names: *aemula* R.Br. 1810, *furcellata* E.Mey. ex Drege 1844, *subcorymbosa* Meisn. 1856.

54 Records

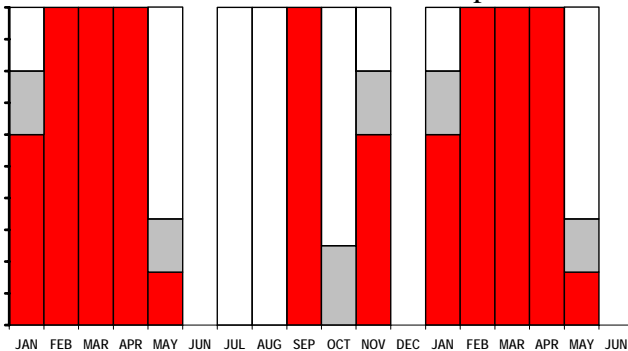
Population (54 records): 33% Common, 52% Frequent, 15% Rare.

Dispersion (51 records): 49% clumped, 47% variable, 2% evenly distributed, 2% widespread.

Flowering (54 records with: Jan 10, Feb 1, Mar 1, Apr 2, May 12, Jun 0, Jul 4, Aug 14, Sep 1, Oct 4, Nov 5, Dec 0): Buds from May to Aug; Flowering from Aug to Nov; Peak Flowering not recorded; Over from Nov to Jan; Fruit from Jan to May; Nothing from Mar to Apr. Peak levels unreliable at 100% from Sep to Oct. Historically recorded as flowering from Aug to Oct.



Growth (54 records with: Jan 10, Feb 1, Mar 1, Apr 2, May 12, Jun 0, Jul 4, Aug 14, Sep 1, Oct 4, Nov 5, Dec 0): Much from Jan to Apr, Sep and Nov; Rare from Jan and Oct to Nov; None from May to Jan. Peak levels unreliable at 100% from Feb to Apr.



Seedlings (31 records): All without any seedlings present.

Fire Survival : No data.

Age to first flowering: First flowers recorded at 100% at 4 years, no data from younger veld.



Height (54 records): 89% 0.2-1 m tall, 11% 1-2 m tall.

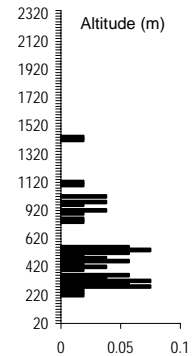
Pollinators (6 records): 67% beetles, 33% bees or wasps.

Detailed Pollinators (5 records): Monkey Beetle (3), Honey Bee, Great Protea Beetle.

Habitat:

Distance to Ocean (53 records): 100% inland - further than 2 km from coast.

Altitude (53 records): 200 - 1340 m; 300 *lq* - 440 *med* - 540 *uq*m.



Landform (53 records): 85% deep soil, 9% shallow soil, 6% rocky outcrops.

Slope (53 records): 53% gentle incline, 45% steep incline, 2% hill top.

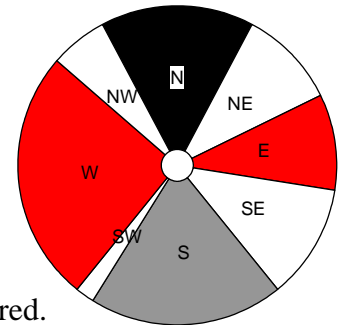
Aspect (51 records): 28% South, 28% West, 23% North, 21% East.

Soil Type (53 records): 36% sandy, 30% loamy, 26% gravelly, 8% rocky.

Soil Colour (53 records): 58% brown, 21% grey, 17% orange, 4% red.

Geology (53 records): 60% sandstone, 21% shale, 13% granite, 6% silcrete or ferricrete.

Vegetation (53 records): 83% shrubland, 17% plantations.



Conservation Status and Threat:

Red Data List Status: Near Threatened D2(i). Occurrence (Fynbos): 261 km² with 67% conserved and 6% lost; Occupancy: 51 km² with 60% conserved and 20% lost. Fragmentation index: 19%.

Nature Reserves (53 records): 45% in nature reserves.

Habitat destruction (53 records): 98% extensive natural habitat, 2% islands.

Alien Invasive Species (53 records): 47% *Pinus*, 42% *Hakea*, 8% Fabaceae

(chiefly alien *Acacia*), 2% Myrtaceae,
2% none.

Alien Density (53 records): 2% alien-free,
64% sparse, 28% abundant, 6% dense.

Cultivation & Utilization:

Picking (47 records): 98% no sign of picking,
2% lightly picked.

Cultivation Status: No noted cultivation.

Atlassers Notes:

A spectacular form getting close to *S. florida* in
size and shape of its use bracts but still erect
and leaves far too small (AGRY1102013);
These were carefully re-examined and found
to match the description of *S. florida* in all
respects: No on subsequent visits found to be
S. rosea - a large bracted form with good
horticultural potential! (WIJ98012401);
11 plants only 2 of which had all their
flowerheads (only) cut off (WIJ98012401);
Quite a few dead plants (WMP98050309);

Big black hairy Monkey Beetles
(AGR97081303);

Confusing Species: Easily recognized and
quite distinct. Non-flowering plants
confused with *S. phylloides* and *S.*
acrocarpa. A large-bracted form from The
Cascades was confused with *S. florida*.

Records of identification queries = 6.

Records of corrected identification queries = 3.

Variation and Taxonomy: A large-bracted
form was noted at The Cascades,
DuToitskloof.

Distribution: Add.

INCLUDEPICTURE

"C:\\temp\\atlas\\SEROSE_m.jpg" *

MERGEFORMAT \d