

Serruria
Spiderheads

This is the only genus that has not been revised within the last half decade. No formal natural groupings exist, and herein we use the groups recognized by Rebelo 1994.

OUTSTANDING ISSUES:

Q for John: Why is *S. decipiens* not *Protea patula* Thunb 1781

Get Bothalia 263-266

REVISIT AND REDO DATA FOR *Se collina*

Find original *Se* for *inconspicua*

Summarize variation in *Se phylloides*

Serruria candicans R.Br. 1810
Shiny Spiderhead

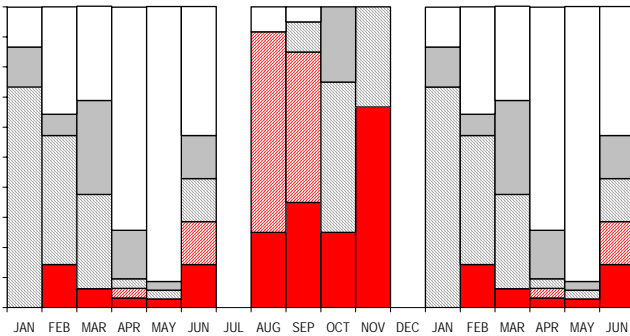
Other Common Names: None known.
Other Scientific Names: None.

165 Records

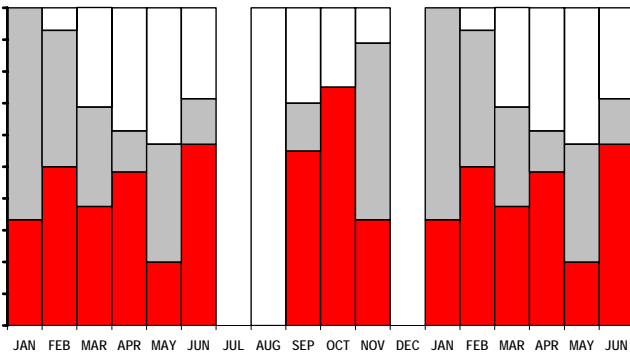
Population (165 records): 2% Abundant, 39% Common, 42% Frequent, 16% Rare.

Dispersion (157 records): 72% variable, 27% clumped, 1% widespread.

Flowering (163 records with: Jan 15, Feb 14, Mar 16, Apr 31, May 35, Jun 7, Jul 0, Aug 12, Sep 20, Oct 4, Nov 9, Dec 0): Buds from Aug to Sep; Flowering from Aug to Nov; Peak Flowering not recorded; Over from Oct to Mar; Fruit from Mar and Oct; Nothing from Feb to Jun. Peak levels at 100% in Nov. Historically recorded as flowering from Jul to Dec.



Growth (163 records with: Jan 15, Feb 14, Mar 16, Apr 31, May 35, Jun 7, Jul 0, Aug 12, Sep 20, Oct 4, Nov 9, Dec 0): Much from Sep to Jun; Rare from Nov to Mar and May; None from Mar to Oct. Peak levels at 100% in Jan.



Seedlings (56 records): All without any seedlings present.

Fire Survival (9 records): 100% survived by seedlings only.

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



Height (165 records): 3% 0-0.2 m tall, 96% 0.2-1 m tall, 1% 1-2 m tall.

Pollinators (3 records): 67% butterflies or moths, 33% bees or wasps.

Detailed Pollinators (2 records): Blues Butterfly.

Habitat:

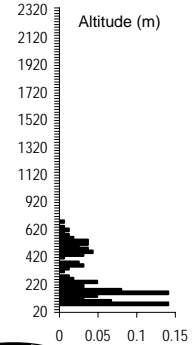
Distance to Ocean (163 records): 100% inland - further than 2 km from coast.

Altitude (163 records): 60 - 680 m; 120_{lq} - 180_{med} - 260_{uqm}.

Landform (162 records): 91% deep soil, 9% shallow soil, 0.6% swamp.

Slope (161 records): 51% gentle incline, 29% platform, 15% steep incline, 4% valley bottom, 1% hill top.

Aspect (138 records): 67% West, 14% South, 10% North, 8% East.

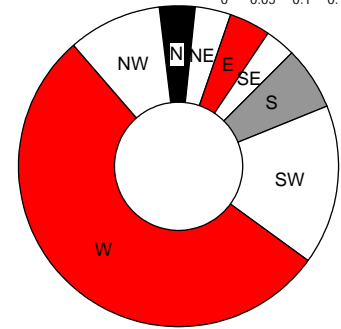


Soil Type (161 records): 39% sandy, 29% loamy, 18% gravelly, 11% clayey, 3% rocky.

Soil Colour (160 records): 69% brown, 14% grey, 12% orange, 4% white, 0.6% yellow, 0.6% red.

Geology (144 records): 44% shale, 31% granite, 17% sandstone, 8% conglomerate, 0.7% Tertiary sands.

Vegetation (162 records): 100% shrubland.



Conservation Status and Threat:

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

Occurrence (Fynbos): 190 km² with 26% conserved and 27% lost; **Occupancy:** 126 km² with 35% conserved and 18% lost. **Fragmentation index:** 20%.

Nature Reserves (163 records): 52% in nature reserves - well conserved.

Habitat destruction (161 records): 98% extensive natural habitat, 1% naturally linear habitats, 0.6% road verges, 0.6% islands.

Alien Invasive Species (161 records): 59% none, 22% Fabaceae (chiefly alien *Acacia*), 8% *Hakea*, 8% *Pinus*, 2% Myrtaceae.

Alien Density (161 records): 59% alien-free, 34% sparse, 6% abundant, 0.6% dense.

Cultivation & Utilization:

Picking (127 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

+1 dead (AGRY6010501); +2 dead
(AGRY6010502);
Densest on termitarium (AGR96042715);
Prolific in white sandy track
(CHE98051406);

Confusing Species: Similar to *S.fasciflora* but
far more silver.

Records of identification queries = 2.

Records of corrected identification queries = 1.

Variation and Taxonomy: No variation noted.

Distribution: Add.

INCLUDEPICTURE

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MERGEFORMAT \d

Serruria fasciflora Salisb. ex Kn. 1809
Common Pin Spiderhead
Speldespinnekopbos

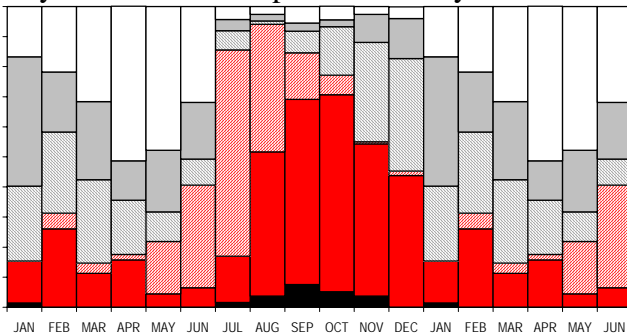
Other Common Names: Fasciated *Serruria*, *Fynspinnekopbos*, *Spinnekopbos*.
Other Scientific Names: *biglandulosa* Schltr 1899, *burmannii* R. Br. 1810, *candicans* Drege ex Meisn 1856, *compar* Meisn 1856, *foeniculacea* Sieber ex Meisn 1856, *knightii* Hutch 1912, *pauciflora* Phill & Hutch 1912, *serraria* (L.) 1753, *serraria* (Thunb.) 1781, *subsericea* Hutch 1912.

3038 Records

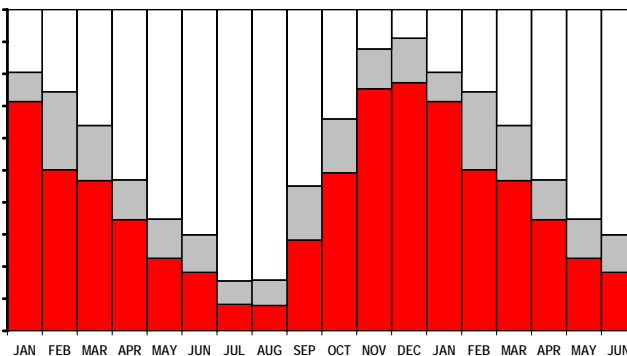
Population (3009 records): 1% Abundant, 34% Common, 51% Frequent, 13% Rare, 0.2% Extinct.

Dispersion (2696 records): 70% variable, 25% clumped, 3% widespread, 1% evenly distributed.

Flowering (2902 records with: Jan 221, Feb 211, Mar 354, Apr 222, May 224, Jun 138, Jul 188, Aug 271, Sep 291, Oct 310, Nov 269, Dec 203): Buds from Jun to Aug; Flowering from Feb and Aug to Dec; Peak Flowering not significant; Over from Nov to Mar; Fruit from Jan to Mar; Nothing from Feb to Jun. Peak levels at 95% in Aug. Historically recorded as flowering from all year round with a peak from May to Dec.



Growth (2876 records with: Jan 220, Feb 211, Mar 357, Apr 217, May 221, Jun 137, Jul 181, Aug 266, Sep 286, Oct 309, Nov 268, Dec 203): Much from Sep to May; Rare from Feb; None from Jan to Oct. Peak levels at 91% in Dec.



Seedlings (1173 records): Absent in 95%; fewer seedlings than prefire adults in 17 cases, and more in 12 cases. Seedlings found in Jan (2),

Feb (5), Apr (3), Jun, Jul (2), Aug (5), Sep (7), Oct, Nov and Dec (2).
Fire Survival (102 records): 82% survived by seedlings only, 15% eliminated from the area by fires, 2% escaped fires in fire-safe areas, 1.0% resprouted from aerial trunks.
Age to first flowering: First flowers recorded at 1 years, 50% estimated at 3-4 years, and 100% recorded at 14 years.



Height (2916 records): 8% 0-0.2 m tall, 91% 0.2-1 m tall, 0.8% 1-2 m tall, 0.0% 2-5 m tall.

Pollinators (98 records): 41% bees or wasps, 21% beetles, 19% butterflies or moths, 17% flies, 1% birds.

Detailed Pollinators (39 records): Honey Bee (13), Monkey Beetle (12), Solitary Bee (4), Wasp (unspecified) (2), Painted Lady Butterfly (2), Long Proboscid Fly (2), Blues Butterfly (2), Great Protea Beetle, African Monarch Butterfly.

Habitat:

Distance to Ocean (2968 records): 95% inland - further than 2 km from coast.

Altitude (2968 records): 20 - 1420 m; 100 *lq* - 220 *med* - 340 *uq*m.

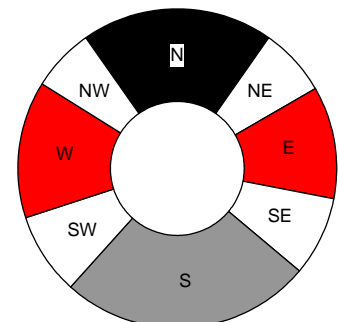
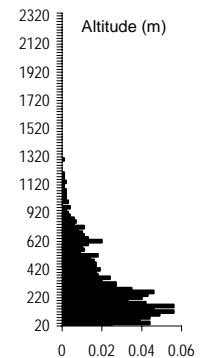
Landform (2863 records): 87% deep soil, 10% shallow soil, 3% rocky outcrops, 0.5% swamp, 0.0% riverine, 0.0% lake edge.

Slope (2861 records): 51% gentle incline, 23% platform, 16% steep incline, 5% hill top, 4% valley bottom, 0.7% dunes, 0.3% cliff.

Aspect (2222 records): 34% South, 26% North, 21% West, 18% East.

Soil Type (2853 records): 65% sandy, 24% loamy, 5% gravelly, 3% clayey, 2% rocky, 0.3% peaty.

Soil Colour (2840 records): 46% grey, 33% brown, 10% white, 4% orange,



4% yellow, 2% black, 1% red.

Geology (2780 records): 61% sandstone, 14% Tertiary sands, 10% shale, 6% silcrete or ferricrete, 5% limestone, 2% granite, 0.9% conglomerate, 0.0% basalt.

Vegetation (2955 records): 95% shrubland, 3% plantations, 0.8% agricultural lands, 0.3% grassland, 0.2% suburban, 0.1% thicket, 0.1% forest, 0.0% wooded grassland.

Conservation Status and Threat:

Red Data List Status: Near Threatened A2c+4c.

Occurrence (Fynbos): 15 789 km² with 22% conserved and 26% lost; Occupancy: 2 603 km² with 23% conserved and 29% lost. Fragmentation index: 7%.

Nature Reserves (2968 records): 35% in nature reserves.

Habitat destruction (2807 records): 84% extensive natural habitat, 10% islands, 3% road verges, 2% naturally linear habitats, 0.6% corridors, 0.4% naturally fragmented habitats, 0.3% patches.

Alien Invasive Species (2806 records): 38% Fabaceae (chiefly alien *Acacia*), 22% *Pinus*, 21% none, 14% *Hakea*, 4% Myrtaceae, 0.2% annual alien grasses, 0.1% other aliens.

Alien Density (2798 records): 21% alien-free, 52% sparse, 18% abundant, 8% dense, 1% impenetrable.

Cultivation & Utilization:

Picking (2207 records): 100% no sign of picking, 0.2% lightly picked.

Cultivation Status: Plantings - 1 record (0.03%).

Witch's Broom Infestation: 1 record (0.03%).

Atlasers Notes:

Some higher than 1m (AWA98103102); A low spreading shrub (JBB98041207); Creeping form (*selected*: AGR95042903, AGR97030115, AGR97081704, AGR97113003);

Flowers all white (but small upright bush) (SMR99090303);

Some individuals resprouting (AGRY2080917); Was common before bushcutting

(AGRY1062603+4); Bushcut except in ditch and under fence (NAHY0081701);

Looked moribund (DJL99040803);

+1 dead (AGR92012305); Lots dead- more dead than alive - probably drought - little rain so far (AGR99072902); Lots dead (40%) (AGRY0011401); More than half seen dead! (ASP94072103); About half plants dead (ASP95030209); Also 1 dead (CHE98052103); Single dead plant seen (DJL99072903); Bushes dying (GED99062203); Many plants were dying (NGF97060103); Looking stressed (NGFY1072101); Although new growth plants looked sick (OUT97030810); Die back (OUT99061203); High mortality - summer drought? (PMR97051402); Patches are dying off inside - this could be a marginal area (SHS93112904); Some patches of die-off (SMR99072906);

Only dead maybe had been very dry?

(VCH98052003); Many dead plants and dying branches occurred towards eastern end of location (YDA92060801); Specially to note dwindling numbers (YDA98061401);

Diptera Bombyliidae - Long Proboscis Fly (CSS97113004); A small butterfly lowered briefly over se as I approached (CVV97012303); Mausirid Wasp (LYM96042505);

Serruria amongst other relics (CBE92111701); Most common in wettest area (OUT98082205); Much sought after by funeral parlours (VJK93093006);

Confusing Species: Most commonly confused (58% of corrected cases) with *S.*

inconspicua, which has much smaller flowers, finer leaves and leaves forming a basket around the flowerheads: in some areas clear diagnostic features were not apparent. Also confused with sister species *S. kraussii* (far larger flowerheads) and *S. zeyheri* (with black tips to the tepals), especially when not in flower. Also confused with *S. "ludwigii"* (7%; which has capitula and resprouts), and *S. phyllocoidea* (4%; which has large single heads with prominent involucre bracts).

Often simply not identified to species (20%).

Records of identification queries = 134.

Records of corrected identification queries = 55.

Variation and Taxonomy: A very variable species, that was once recognized as 5 separate species, and which should be split into well over 5 separate species or subspecies. Some forms are now known from only a few remnant patches on the west coast: a particularly beautiful, dense-rounded flowerhead form was noted from the N1 verge at Kraaifontein Industria. The Elim-Agulhas area has a prominent creeping form. Occasional individuals resprout in some populations, but it has not been determined if this is due to particularly cool fires or an inherent resprouting ability. In the Shaw's Pass and Babilonstoring area to Bot River and Caledon it is particularly difficult to separate it from *S. inconspicua*, except in that it is a more robust plant.

In Flora Capensis Phillips and Hutchinson erroneously separated those with many and few (less than 10) flowers per flowerhead.

- *S. pauciflora* approaches *S. inconspicua* and occurs in the Keinrivier and surrounding mountains.
- *S. knightii* (few flowers) and *S. burmannii* (many flowers per flowerhead) are the typical mountain form, characterized by only few short hairs – or none – on the tepal tips. It ranges from Bainskloof and Sir Lowries Pass to George, and on the granites and sandstone of the Cape Peninsula. *S. knightii* is based on *S. fasciflora* of Salisbury.
- *S. subsericea* is often confused with *S. candicans* (but is not as hairy or silvery coloured, and has flat hairs on the tepals) and is confined to the West Coast sandy flats.

- *S. biglandulosa* is known from only one specimen and is probably intermediate between *S. fasciflora* and *S. krausii*.

Distribution: Add.

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Serruria inconspicua Guthrie & Salter Cryptic Spiderhead

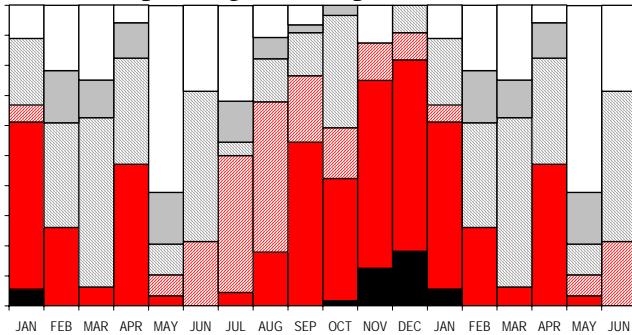
Other Common Names: None known.
Other Scientific Names: None.

333 Records

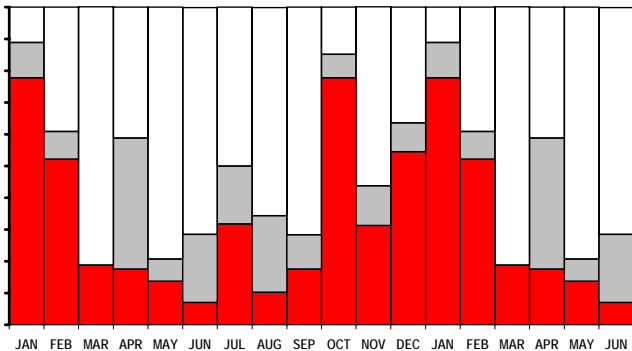
Population (329 records): 3% Abundant, 43% Common, 46% Frequent, 9% Rare.

Dispersion (317 records): 66% variable, 20% clumped, 11% widespread, 3% evenly distributed.

Flowering (330 records with: Jan 18, Feb 23, Mar 16, Apr 17, May 29, Jun 14, Jul 22, Aug 28, Sep 77, Oct 59, Nov 16, Dec 11): Buds from Jun to Sep; Flowering from Sep to Feb and Apr; Peak Flowering not significant; Over from Jan to Apr, Jun and Oct; Fruit not significant; Nothing from Feb to Mar and May to Jul. Peak levels at 100% in Dec. Historically recorded as flowering from Jul to Dec, peaking from Sep to Oct.



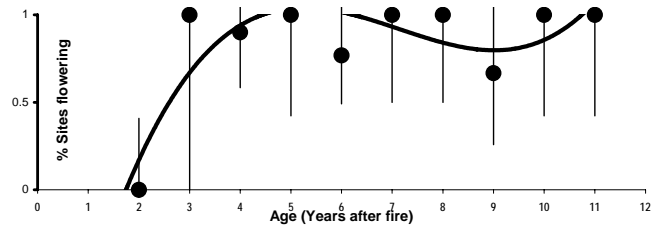
Growth (323 records with: Jan 18, Feb 23, Mar 16, Apr 17, May 29, Jun 14, Jul 22, Aug 29, Sep 74, Oct 54, Nov 16, Dec 11): Much from Oct to Feb and Jul; Rare from Apr, Jun and Aug; None from Feb to Sep and Nov to Dec. Peak levels at 89% in Jan.



Seedlings (139 records): Absent in 99%; fewer seedlings than prefire adults in 1 case. Seedlings found in Sep.

Fire Survival (10 records): 100% survived by seedlings only.

Age to first flowering: First flowers recorded at 3 years, 50% estimated at 2-3 years, and 100% recorded consistently at 7 years.



Height (328 records): 42% 0-0.2 m tall, 58% 0.2-1 m tall, 0.3% 1-2 m tall.

Pollinators (1 record): 100% flies.

Detailed Pollinators: No additional data.

Habitat:

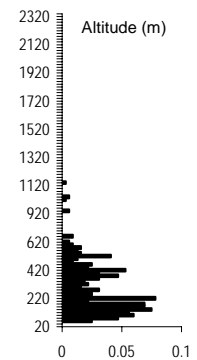
Distance to Ocean (319 records): 98% inland - further than 2 km from coast.

Altitude (319 records): 40 - 1040 m; 120_{iq} - 220_{med} - 300_{uq} m.

Landform (318 records): 86% deep soil, 10% shallow soil, 2% rocky outcrops, 0.9% swamp, 0.6% riverine.

Slope (318 records): 75% gentle incline, 14% steep incline, 9% platform, 1% hill top, 0.6% valley bottom.

Aspect (301 records): 33% South, 25% North, 22% West, 20% East.



Soil Type (315 records):

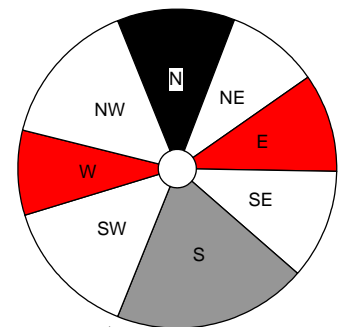
63% sandy, 20% loamy, 9% gravelly, 6% clayey, 1% rocky, 0.6% peaty.

Soil Colour (314 records):

58% grey, 26% brown, 5% orange, 5% white, 4% yellow, 2% black.

Geology (301 records): 78% sandstone, 19% shale, 3% silcrete or ferricrete, 0.3% granite.

Vegetation (317 records): 98% shrubland, 2% plantations, 0.3% grassland, 0.3% agricultural lands.



Conservation Status and Threat:

Red Data List Status: Vulnerable A2c.

Occurrence (Fynbos): 1 324 km² with 27% conserved and 32% lost; **Occupancy:** 193 km² with 35% conserved and 29% lost. **Fragmentation index:** 8%.

Nature Reserves (319 records): 59% in nature reserves - well conserved.

Habitat destruction (313 records): 94% extensive natural habitat, 4% islands, 0.6% road verges, 0.6% naturally linear habitats, 0.3% corridors, 0.3% naturally fragmented habitats.

Alien Invasive Species (309 records):

45% *Pinus*, 26% none, 20% Fabaceae (chiefly alien *Acacia*), 8% *Hakea*, 0.3% Myrtaceae.

Alien Density (308 records): 26% alien-free, 56% sparse, 14% abundant, 3% dense, 1.0% impenetrable.

Cultivation & Utilization:

Picking (224 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

Only 2 plants in older veld while frequent in younger veld (KWD92100404); The only plants seen were small young plants on a patch that had burnt about 1 year ago (SMR97022007);

Confusing Species: Confused with *S. fasciflora* only. In many cases it is not possible to easily determine if the plants are a robust form of *S. inconspicua* or a robust form of *S. fasciflora*. The area north of Hemel and Aarde is the most problematic region in this regard.

Records of identification queries = 46.

Records of corrected identification queries = 26.

Variation and Taxonomy: Not much variation noted, mostly attributable to intermediates with *S. fasciflora*.

Distribution: Add.

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Serruria krausii Meisn. 1856
Snowball Spiderhead

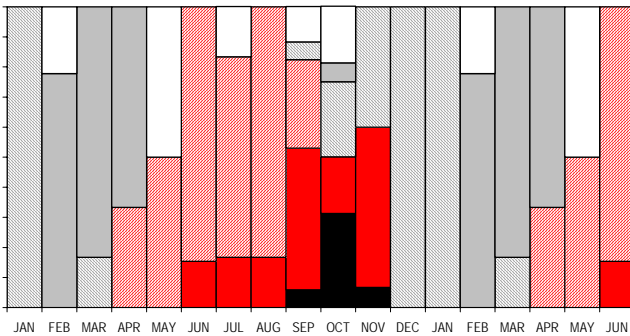
Other Common Names: None known.
Other Scientific Names: None.

107 Records

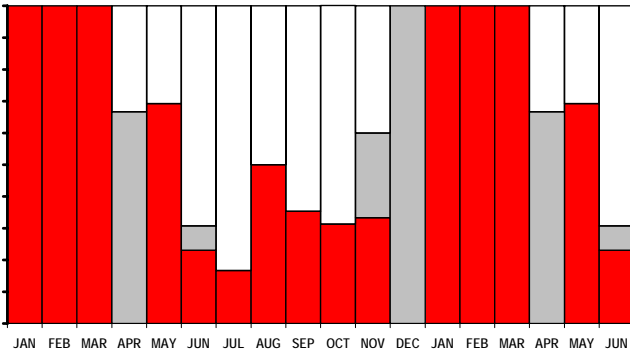
Population (107 records): 13% Common, 56% Frequent, 31% Rare.

Dispersion (89 records): 52% variable, 47% clumped, 1% evenly distributed.

Flowering (105 records with: Jan 1, Feb 9, Mar 6, Apr 3, May 12, Jun 13, Jul 6, Aug 6, Sep 17, Oct 16, Nov 15, Dec 1): Buds from Apr to Sep; Flowering from Sep and Nov; Peak Flowering from Oct; Over from Oct to Jan; Fruit from Feb to Apr; Nothing from Feb and May. Peak levels at 100% in Nov. Historically recorded as flowering from Jul to Nov.



Growth (106 records with: Jan 1, Feb 9, Mar 6, Apr 3, May 13, Jun 13, Jul 6, Aug 6, Sep 17, Oct 16, Nov 15, Dec 1): Much from all year round; Rare from Apr and Nov to Dec; None from Apr to Nov. Peak levels at 100% from Dec to Mar.



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

Fire Survival (9 records): 89% survived by seedlings only, 11% escaped fires in fire-safe areas.

Age to first flowering: First flowers recorded at 2 years, 50% estimated at 3 years, and 100% consistently recorded at 6 years.



Height (106 records): 2% 0-0.2 m tall, 91% 0.2-1 m tall, 8% 1-2 m tall.

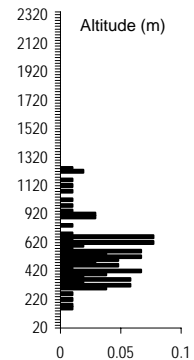
Pollinators (7 records): 57% beetles, 14% butterflies or moths, 14% bees or wasps, 14% flies.

Detailed Pollinators (1 record): Ladybird Beetle.

Habitat:

Distance to Ocean (104 records): 100% inland - further than 2 km from coast.

Altitude (104 records): 140 - 1140 m; 380 *lq* - 500 *med* - 600 *uq* m.



Landform (104 records):

94% deep soil, 5% shallow soil, 1.0% rocky outcrops.

Slope (104 records): 51% steep incline, 47% gentle incline, 1.0% cliff, 1.0% valley bottom.

Aspect (103 records): 57% South, 16% East,

15% West, 12% North.

Soil Type (104 records):

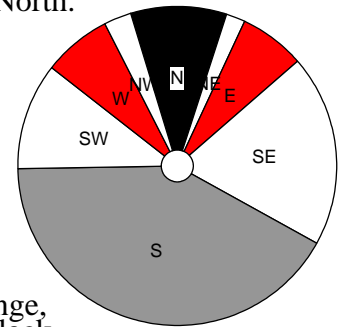
44% loamy, 25% sandy, 22% clayey, 9% gravelly.

Soil Colour (104 records):

82% brown, 8% grey, 5% orange, 4% yellow, 2% black.

Geology (98 records): 45% sandstone, 29% shale, 24% granite, 2% conglomerate.

Vegetation (104 records): 89% shrubland, 10% plantations, 1.0% agricultural lands.



Conservation Status and Threat:

Red Data List Status: Vulnerable A2c, B1a(ii)b(i,ii,iii,iv,v)+2a(ii)b(i,ii,iii,iv,v).

Occurrence (Fynbos): 132 km² with 36% conserved and 22% lost; **Occupancy:** 63 km² with 40% conserved and 14% lost. **Fragmentation index:** 47%.

Nature Reserves (104 records): 71% in nature reserves - well conserved.

Habitat destruction (103 records): 94% extensive natural habitat, 6% islands.

Alien Invasive Species (98 records): 46% *Pinus*, 34% none, 14% *Hakea*,

4% Fabaceae (chiefly alien *Acacia*),
2% Myrtaceae.

Alien Density (98 records): 34% alien-free,
50% sparse, 13% abundant, 3% dense.

Cultivation & Utilization:

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

Cultivation Status: No noted cultivation.

Atlassers Notes:

Only flowering in top section of plot
(GYC93102201); 1.8 m tall with seeds from
2 flowerings (GYC94050505);

Green Flower Beetles (AGR97112306);

This is probably a new population is this rare
species on granite clay sands with large

surface stones seasonally moist along road
(NAH97020301);

Confusing Species: Misidentified as *S.*
fasciflora (which has much smaller
flowerheads), and when not in flower as *S.*
rosea and *S. decipiens*.

Records of identification queries = 14.

Records of corrected identification queries = 6.

Variation and Taxonomy: No variation noted.

Distribution: Add.

INCLUDEPICTURE

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Serruria viridifolia Rourke 1990 Mat Spiderhead

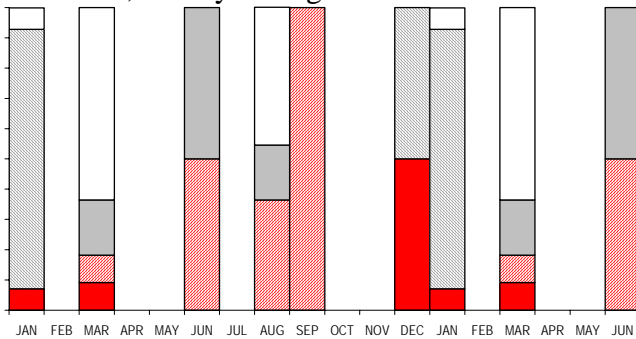
Other Common Names: None known.
Other Scientific Names: *glabra nomen nudum*
- in Tansley.

44 Records

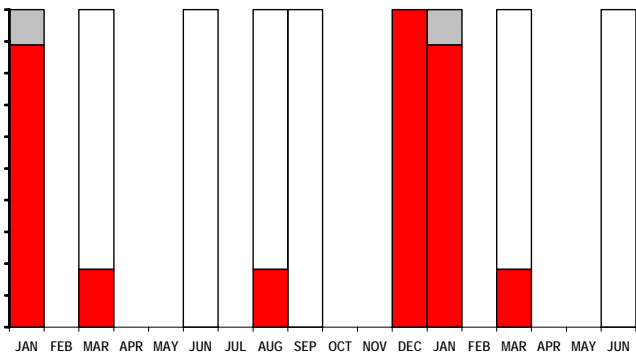
Population (43 records): 16% Common, 72% Frequent, 12% Rare.

Dispersion (43 records): 63% variable, 35% clumped, 2% evenly distributed.

Flowering (43 records with: Jan 14, Feb 0, Mar 11, Apr 0, May 0, Jun 2, Jul 0, Aug 11, Sep 3, Oct 0, Nov 0, Dec 2): Buds from Jun to Sep; Flowering from Dec; Peak Flowering not recorded; Over from Dec to Jan; Fruit from Jun; Nothing from Mar and Aug. Peak levels unreliable at 100% from Sep to Dec. Historically recorded as flowering from Sep to Dec, mainly during Oct to Nov.



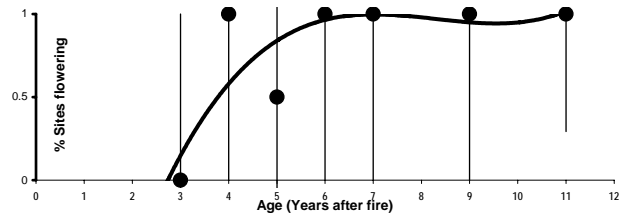
Growth (37 records with: Jan 9, Feb 0, Mar 11, Apr 0, May 0, Jun 2, Jul 0, Aug 11, Sep 3, Oct 0, Nov 0, Dec 1): Much from Dec to Jan; Rare not significant; None from Mar to Sep. Peak levels unreliable at 100% from Dec to Jan.



Seedlings (19 records): All without any seedlings present.

Fire Survival (1 record): 100% escaped fires in fire-safe areas.

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



Height (44 records): 68% 0-0.2 m tall, 32% 0.2-1 m tall.

Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

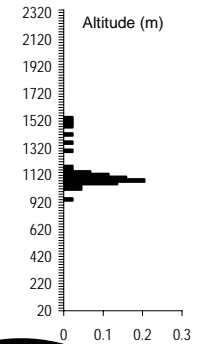
Distance to Ocean (44 records): 100% inland - further than 2 km from coast.

Altitude (44 records): 820 - 1440 m; 960 *lq* - 980 *med* - 980 *uq*m.

Landform (44 records): 91% deep soil, 9% shallow soil.

Slope (43 records): 77% gentle incline, 19% platform, 2% steep incline, 2% valley bottom.

Aspect (36 records): 47% North, 38% East, 14% West, 1% South.



Soil Type (44 records):

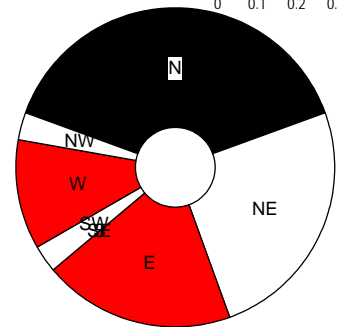
84% sandy, 9% loamy, 5% rocky, 2% gravelly.

Soil Colour (43 records):

53% grey, 26% brown, 19% white, 2% yellow.

Geology (43 records): 81% sandstone, 19% shale.

Vegetation (42 records): 98% shrubland, 2% grassland.



Conservation Status and Threat:

Red Data List Status: Vulnerable D2(ii).

Occurrence (Fynbos): 108 km² with 19% conserved and 1% lost; **Occupancy:** 34 km² with 18% conserved and 0% lost. **Fragmentation index:** 21%.

Nature Reserves (44 records): 5% in nature reserves - unconserved.

Habitat destruction (43 records): 95% extensive natural habitat, 2% islands, 2% corridors.

Alien Invasive Species (44 records):

52% *Hakea*, 30% none, 16% *Pinus*, 2% Fabaceae (chiefly alien *Acacia*).

Alien Density (44 records): 30% alien-free, 70% sparse.

Cultivation & Utilization:

Picking (29 records): 100% no sign of picking.
Cultivation Status: No noted cultivation.

Atlassers Notes:

At first i thought that all the plants had escaped fire as there were quite a few seedlings. But closer inspection revealed that the plants accumulate debris and produce roots from stems within these - these survive the fires and resprout. About 60-80% of plants survived the fire - a weak resprouter!
(AGRY1032312);

Some debate as to whether this is the real thing - this plant is not totally prostrate but a sprawling bush - suggested intermediate between *S. viridifolia* and *S. inconspicua*?
(SHR95011404+06);

Confusing Species: Mistaken for *S. inconspicua*, which is very much finer, and not a bright green, almost succulent plant.
Records of identification queries = 10.
Records of corrected identification queries = 5.

Variation and Taxonomy: North of Wolfieskop the plants sprawl rather than form mats.

Distribution: Add.

INCLUDEPICTURE

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MERGEFORMAT \d

Serruria zeyheri Meisn. 1856
Matchstick Spiderhead

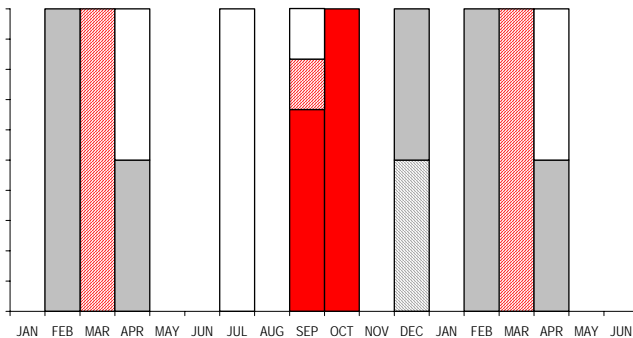
Other Common Names: None known.
Other Scientific Names: None.

14 Records

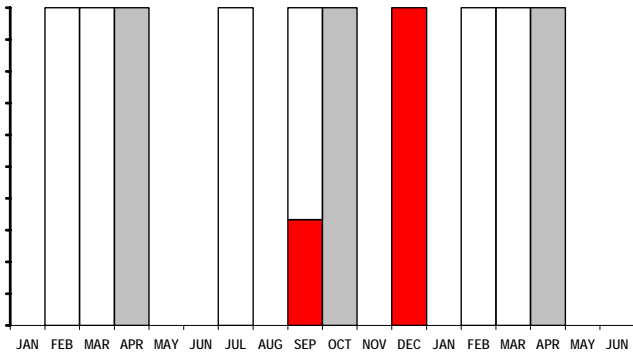
Population (14 records): 21% Common, 71% Frequent, 7% Rare.

Dispersion (13 records): 46% variable, 46% clumped, 8% widespread.

Flowering (14 records with: Jan 0, Feb 1, Mar 1, Apr 2, May 0, Jun 0, Jul 1, Aug 0, Sep 6, Oct 1, Nov 0, Dec 2): Buds from Mar; Flowering from Sep to Oct; Peak Flowering not recorded; Over from Dec; Fruit from Dec to Feb and Apr; Nothing from Apr to Jul. Peak levels unreliable at 100% in Oct. Historically recorded as flowering from Aug to Nov.



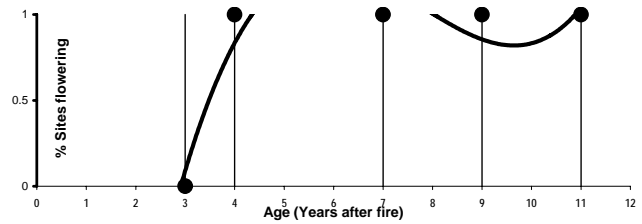
Growth (14 records with: Jan 0, Feb 1, Mar 1, Apr 2, May 0, Jun 0, Jul 1, Aug 0, Sep 6, Oct 1, Nov 0, Dec 2): Much from Sep and Dec; Rare from Apr and Oct; None from Feb to Mar and Jul to Sep. Peak levels unreliable at 100% in Oct to Dec.



Seedlings (9 records): All without any seedlings present.

Fire Survival : No data.

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



Height (14 records): 14% 0-0.2 m tall, 79% 0.2-1 m tall, 7% 1-2 m tall.

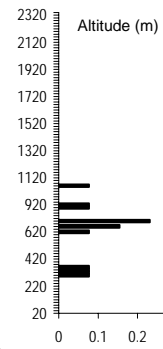
Pollinators (1 record): 100% bees or wasps.

Detailed Pollinators (1 record): Honey Bee.

Habitat:

Distance to Ocean (13 records): 100% inland - further than 2 km from coast.

Altitude (13 records): 280 - 960 m; 340_{lq} - 660_{med} - 660_{uq}m.



Landform (13 records): 92% deep soil, 8% shallow soil.

Slope (13 records): 46% gentle incline, 31% steep incline, 15% hill top, 8% valley bottom.

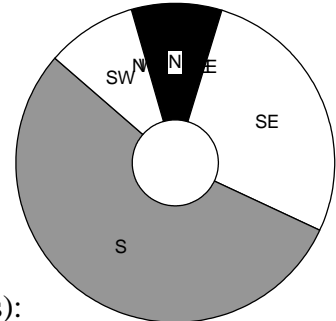
Aspect (11 records): 77% South, 9% North, 9% East, 5% West.

Soil Type (13 records): 54% loamy, 23% sandy, 15% gravelly, 8% clayey.

Soil Colour (13 records): 69% brown, 31% grey.

Geology (12 records): 50% shale, 42% sandstone, 8% granite.

Vegetation (13 records): 100% shrubland.



Conservation Status and Threat:

Red Data List Status: Endangered A2c, D.

Occurrence (Fynbos): 109 km² with 53% conserved and 5% lost; **Occupancy:** 11 km² with 59% conserved and 3% lost.

Fragmentation index: 9%.

Nature Reserves (13 records): 69% in nature reserves - well conserved.

Habitat destruction (13 records):

100% extensive natural habitat.

Alien Invasive Species (13 records):

77% *Pinus*, 15% Fabaceae (chiefly alien *Acacia*), 8% none.

Alien Density (13 records): 8% alien-free, 46% sparse, 23% abundant, 15% dense, 8% impenetrable.

Cultivation & Utilization:

Picking (11 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

Sweetly scented (SHR97091404);

Confusing Species: Although easy to confuse with *S. fasciflora* it is too rare to readily come into contention. The leaves are far longer than typical of *S. fasciflora*.
Records of identification queries = 1.

Variation and Taxonomy: No variation noted.

Distribution: Add.

INCLUDEPICTURE

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MERGEFORMAT \d

Serruria adscendens (Lam.) R.Br. 1791, 1810
Kleinmond Spiderhead

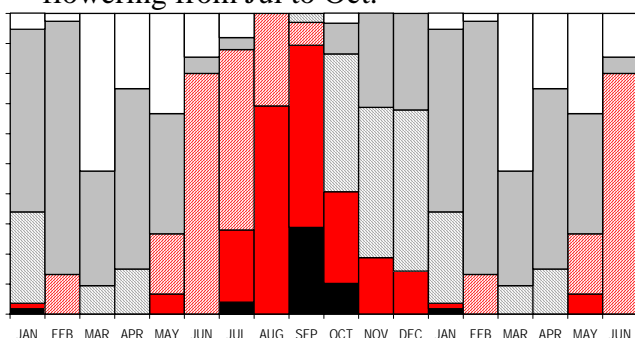
Other Common Names: None known.
Other Scientific Names: *compar* (Poir) 1816.

417 Records

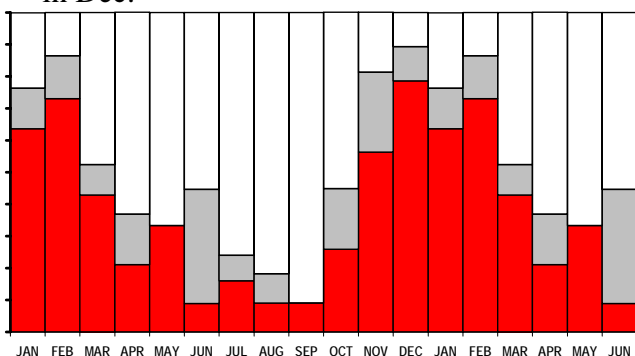
Population (415 records): 7% Abundant, 51% Common, 38% Frequent, 5% Rare.

Dispersion (402 records): 70% variable, 17% clumped, 10% widespread, 2% evenly distributed.

Flowering (412 records with: Jan 56, Feb 38, Mar 21, Apr 20, May 15, Jun 55, Jul 25, Aug 13, Sep 66, Oct 59, Nov 16, Dec 28): Buds from May to Aug; Flowering from Jul to Oct; Peak Flowering from Sep; Over from Oct to Jan; Fruit from Nov to May; Nothing from Mar to May. Peak levels at 100% from Aug to Sep. Historically recorded as flowering from Jul to Oct.



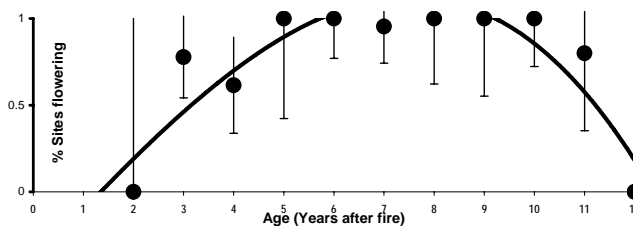
Growth (407 records with: Jan 55, Feb 37, Mar 21, Apr 19, May 15, Jun 56, Jul 25, Aug 11, Sep 66, Oct 58, Nov 16, Dec 28): Much from Oct to May; Rare from Jun and Nov; None from Jan and Mar to Oct. Peak levels at 89% in Dec.



Seedlings (169 records): Absent in 91%; fewer seedlings than prefire adults in 3 cases, and more in 5 cases. Seedlings found in May, Jun (4), Jul and Oct (2).

Fire Survival (13 records): 62% survived by seedlings only, 23% resprouted from underground boles, 8% eliminated from the area by fires, 8% escaped fires in fire-safe areas.

Age to first flowering: First flowers recorded at 3 years, 50% estimated at 2-3 years, and 100% recorded at 5 years, with some senescence recorded after 11 years, although still present at 21 years.



Height (413 records): 11% 0-0.2 m tall, 89% 0.2-1 m tall, 0.2% 1-2 m tall.

Pollinators (8 records): 50% beetles, 38% bees or wasps, 13% none observed.

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

Habitat:

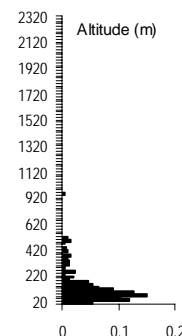
Distance to Ocean (392 records): 75% coastal - less than 2 km from coast.

Altitude (392 records): 20 - 860 m; 40_{lq} - 80_{med} - 100_{ug}m.

Landform (388 records): 68% deep soil, 20% shallow soil, 11% rocky outcrops, 1% swamp.

Slope (387 records): 50% gentle incline, 35% steep incline, 10% platform, 2% valley bottom, 2% hill top, 0.8% cliff, 0.8% dunes.

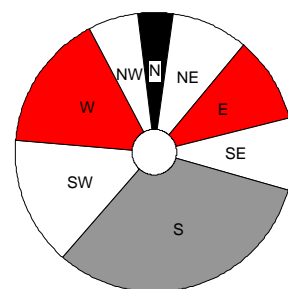
Aspect (345 records): 43% South, 28% West, 19% East, 10% North.



Soil Type (387 records): 75% sandy, 11% loamy, 6% gravelly, 5% rocky, 2% peaty.

Soil Colour (385 records): 77% grey, 9% brown, 7% white, 5% black, 0.8% orange, 0.5% yellow, 0.3% red.

Geology (384 records): 96% sandstone, 3% Tertiary sands, 0.8% shale, 0.3% conglomerate.



Vegetation (387 records): 99% shrubland, 0.8% thicket, 0.3% grassland, 0.3% suburban.

Conservation Status and Threat:

Red Data List Status: Near Threatened A2c, B1b(i)c(iv)+2b(i)c(iv).

Occurrence (Fynbos): 944 km² with 26% conserved and 27% lost; **Occupancy:** 207 km² with 38% conserved and 18% lost. **Fragmentation index:** 17%.

Nature Reserves (392 records): 47% in nature reserves.

Habitat destruction (384 records): 96% extensive natural habitat, 2% islands, 2% naturally linear habitats, 0.3% road verges.

Alien Invasive Species (378 records): 55% none, 29% Fabaceae (chiefly alien *Acacia*), 13% *Pinus*, 2% *Hakea*, 0.8% Myrtaceae.

Alien Density (378 records): 55% alien-free, 41% sparse, 3% abundant, 0.8% dense, 0.3% impenetrable.

Cultivation & Utilization:

Picking (276 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

Lots of small plants in open spaces (APE92060702);

Thicker form when coastal - leaves tending forwards fleshy lower leaves persistent when dead (GED99102706);

Specially to note dwindling numbers of plants (YDA98061401);

Confusing Species: Easily confused with *S. rubricaulis*, but this species is single stemmed and does not resprout after fires. A single record of misidentification with *S. rostellaris*, which has capitula.

Records of identification queries = 16.

Records of corrected identification queries = 1.

Variation and Taxonomy: No significant variation noted.

Distribution: Add.

INCLUDEPICTURE

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

MERGEFORMAT \d

Serruria bolusii Phill. & Hutch. 1912
Viljoenshof Spiderhead

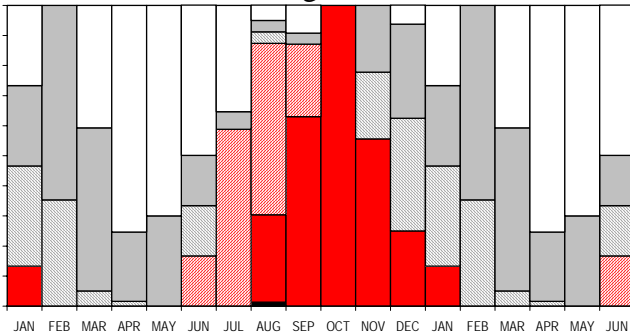
Other Common Names: None known.
Other Scientific Names: None.

458 Records

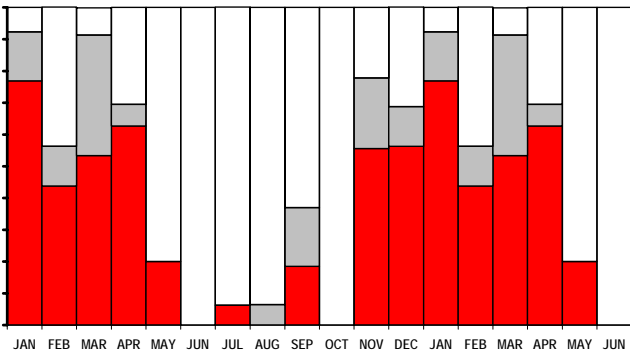
Population (451 records): 3% Abundant, 37% Common, 51% Frequent, 9% Rare.

Dispersion (387 records): 74% variable, 21% clumped, 4% widespread, 0.5% evenly distributed.

Flowering (408 records with: Jan 15, Feb 17, Mar 59, Apr 61, May 10, Jun 6, Jul 34, Aug 79, Sep 54, Oct 3, Nov 54, Dec 16): Buds from Jul to Sep; Flowering from Aug to Dec; Peak Flowering not significant; Over from Nov to Feb; Fruit from Nov to May; Nothing from Jan and Mar to Jul. Peak levels unreliable at 100% in Oct. Historically recorded as flowering from Jul to Nov.



Growth (398 records with: Jan 13, Feb 16, Mar 58, Apr 59, May 10, Jun 6, Jul 32, Aug 77, Sep 54, Oct 3, Nov 54, Dec 16): Much from Nov to Apr; Rare from Mar and Nov; None from Feb and Apr to Dec. Peak levels at 92% in Jan.



Seedlings (190 records): Absent in 98%; fewer seedlings than prefire adults in 2 cases. Seedlings found in Aug and Sep.

Fire Survival (18 records): 83% survived by seedlings only, 11% eliminated from the area by fires, 6% resprouted from underground boles.

Age to first flowering: First flowers recorded at 1 years, 50% estimated at 2-3 years, and 100% consistently recorded at 6 years.



Height (408 records): 13% 0-0.2 m tall, 87% 0.2-1 m tall.

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

Detailed Pollinators (1 record): Honey Bee.

Habitat:

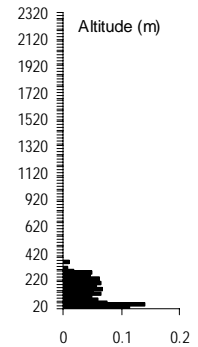
Distance to Ocean (453 records): 91% inland - further than 2 km from coast.

Altitude (453 records): 20 - 580 m; 20 *lq* - 80 *med* - 140 *uq*m.

Landform (404 records): 88% deep soil, 5% swamp, 5% shallow soil, 1% rocky outcrops, 0.7% lake edge.

Slope (403 records): 52% gentle incline, 31% platform, 8% hill top, 4% steep incline, 4% valley bottom, 0.5% dunes.

Aspect (280 records): 35% South, 27% North, 25% East, 13% West.

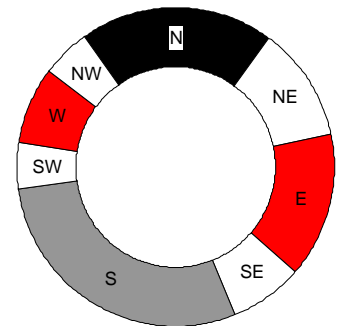


Soil Type (403 records): 83% sandy, 12% loamy, 3% clayey, 1% gravelly, 0.5% peaty.

Soil Colour (401 records): 55% grey, 20% brown, 16% white, 5% yellow, 2% black, 1.0% orange, 0.7% red.

Geology (393 records): 67% sandstone, 11% limestone, 9% silcrete or ferricrete, 8% Tertiary sands, 5% shale, 0.3% conglomerate.

Vegetation (450 records): 98% shrubland, 0.7% agricultural lands, 0.7% plantations, 0.4% suburban, 0.2% grassland.



Conservation Status and Threat:

Red Data List Status: Near Threatened A2c. Occurrence (Fynbos): 1 513 km² with 5% conserved and 37% lost; Occupancy: 466 km² with 10% conserved and 21% lost. Fragmentation index: 26%.

Nature Reserves (453 records): 17% in nature reserves - inadequately conserved.

Habitat destruction (393 records): 86% extensive natural habitat, 8% islands,

3% naturally linear habitats, 1% road verges, 0.8% naturally fragmented habitats, 0.5% corridors, 0.3% patches.

Alien Invasive Species (396 records):

47% Fabaceae (chiefly alien *Acacia*), 24% none, 22% *Pinus*, 4% Myrtaceae, 3% *Hakea*.

Alien Density (395 records): 24% alien-free, 51% sparse, 20% abundant, 5% dense, 1% impenetrable.

Cultivation & Utilization:

Picking (309 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes: None.

Confusing Species: Originally atlassed as *S. nervosa* - only recognized as a distinct species from this when sufficient data had been assembled, well into the atlas project. Data were subsequently field checked and changed appropriately. It differs from the far

more localized *S. nervosa* which typically is erect with a very few (usually single) heads, in being relatively prostrate and with multiple heads. Also confused with *S. adscendens* (64% of cases, which does not have ribbed bracts), *S. rubricaulis* (20%, which resprouts) and *S. fasciflora* (4%, which has straight styles), mainly by atlassers convinced that it was not *S. nervosa*.

Records of identification queries = 327.

Records of corrected identification queries = 25.

Variation and Taxonomy: No significant variation noted. Originally considered synonymous to *S. nervosa*, this is clearly not the case.

Distribution: Add.

INCLUDEPICTURE

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MERGEFORMAT \d

Serruria collina Salisb. ex Kn.

Lost Spiderhead

Redo this species!

1 Records

Historically recorded as flowering from Jul to Oct.

Population (1 records): 0% Common,

Serruria collina collina Salisb. ex Kn. 1809
Northern Lost Spiderhead

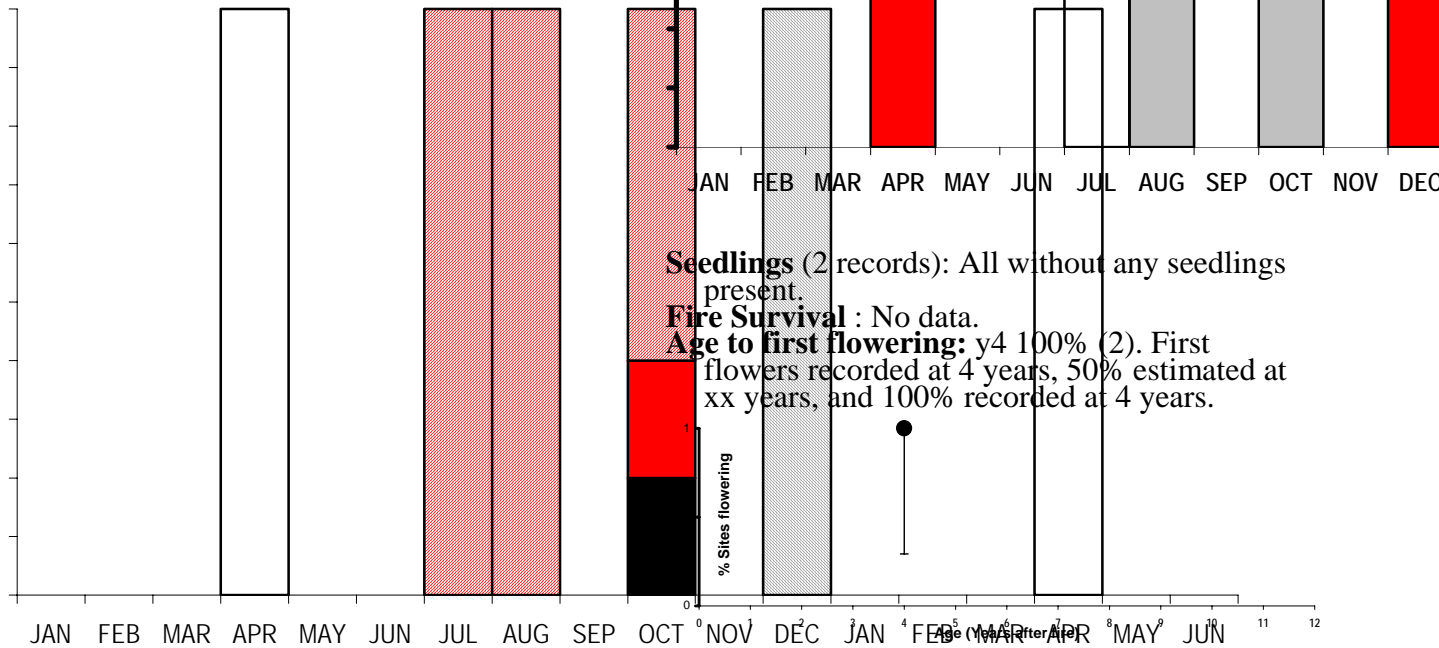
Other Common Names: Hill Serruria.
Other Scientific Names: *flagellaris* (Poir) 1816.

10 Records

Population (10 records): 0% Common, 60% Frequent, 40% Rare.

Dispersion (6 records): 83% clumped, 17% variable.

Flowering (10 records with: Jan 0, Feb 0, Mar 0, Apr 1, May 0, Jun 0, Jul 2, Aug 1, Sep 0, Oct 5, Nov 0, Dec 1): Buds from Jul 100 - Aug 100 - Oct 60 -; Flowering from Oct 20 -; Peak Flowering from Oct 20 -; Over from Dec 100 -; Fruit from; Nothing from Apr 100. Peak levels at % in. Historically recorded as flowering from XXX.



Growth (9 records with: Jan 0, Feb 0, Mar 0, Apr 1, May 0, Jun 0, Jul 2, Aug 1, Sep 0, Oct 4, Nov 0, Dec 1): Much from Apr 100 - Dec 100 -; Rare from Aug 100 - Oct 50 -; None from Jul 100 - Oct 50.

Height (10 records): 20% 0-0.2 m tall, 80% 0.2-1 m tall.

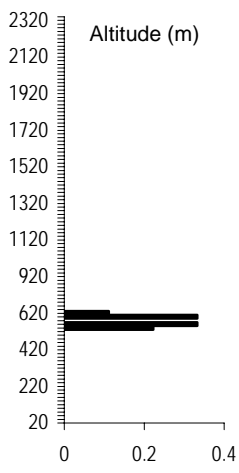
Pollinators: No data.

Detailed Pollinators: No additional data.

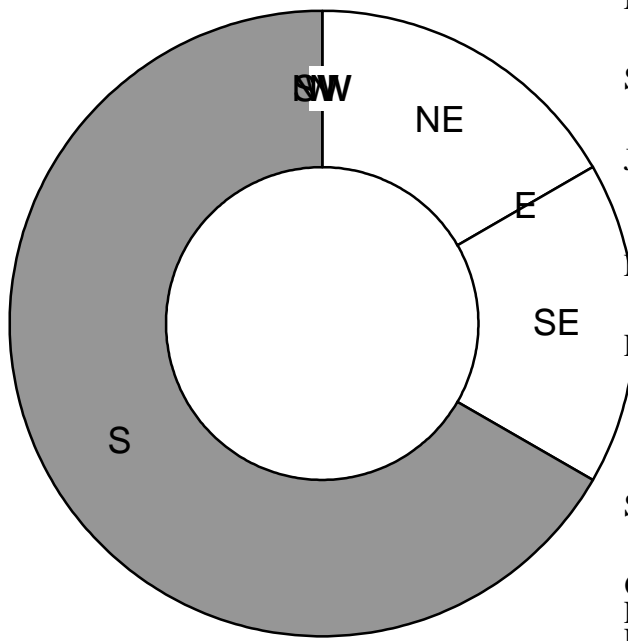
Habitat:

Distance to Ocean (9 records): 100% coastal - less than 2 km from coast.

Altitude (9 records): 520 - 620 m; 540_{lq} - 560_{med} - 560_{uq}m.



Landform (9 records): 67% deep soil, 22% shallow soil, 11% swamp.
Slope (9 records): 56% gentle incline, 11% steep incline, 11% hill top, 11% valley bottom, 11% platform.
Aspect (6 records): 75% South, 17% East, 8% North.



Soil Type (8 records): 100% sandy.
Soil Colour (8 records): 88% grey, 13% brown.
Geology (9 records): 100% sandstone.
Vegetation (9 records): 100% shrubland.

Conservation Status and Threat:
Red Data List Status:
 Occurrence (Fynbos): km2 with % conserved and % lost; Occupancy: km2 with % conserved and % lost. Fragmentation index: %.

Nature Reserves (9 records): 100% in nature reserves - well conserved.
Habitat destruction (7 records): 100% extensive natural habitat.
Alien Invasive Species (8 records): 75% none, 13% Fabaceae (chiefly alien *Acacia*), 13% *Pinus*.
Alien Density (8 records): 75% alien-free, 25% sparse.

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

Atlassers Notes:
 LYM99101202 FL Some Se Coll Had Flowerd;
 SHR95100101 FL Is Flowering For At Least The Second Year;
 AJT93041801 ID ! Identification Queried: Se Cyan - Originally Atlassed As Se Cyan - Changed To Se Collina And Then Changed Back Again - Is Probably Se Coll -changed;
 LYM97101401 ID ! Se Collina Looks Very Different To That Occurring On Rooikrans And Teeberg;
 NGF94101502 ID ! Se Coll Is Most Impressive I Thought I Hope My Photographs Come Out Nicely;
 SHR95100101 ID ! Se Coll On Lower S Slope Of Suther Peak Has Multiple Flowerheads & Is Multi - Stemmed;
 JID97070701 PS Single Well-established Platin Of Se Coll Found Near Small Concrete Structure On Illusive Path Up N Side Of Beaconed Koppie;
 NGF94101502 PS Se Coll Could Only Be Found In One Clumped Site And No Where Else;
 PVR95082306 PS The Se Coll Are The Fine Leaf Form & Occur On The South Facing Slope On The N Side Of This Wetland - A Very Different Growth Form To The Se Coll Which Are Found On The N Slopes Of Rooikrantz - Jpr Happy With Se Coll;
 SHR95100101 PS Se Coll On Lower S Slope Of Suther Peak;

Confusing Species: Add.
 Records of identification queries = 4
 Records of corrected identification queries = 1 = 0.0%.
 , SECYAN

Variation and Taxonomy: Add.

Distribution: Add.
 INCLUDEPICTURE
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 MERGEFORMAT \d

Serruria collina flagellaris R.Br.
Southern Lost Spiderhead

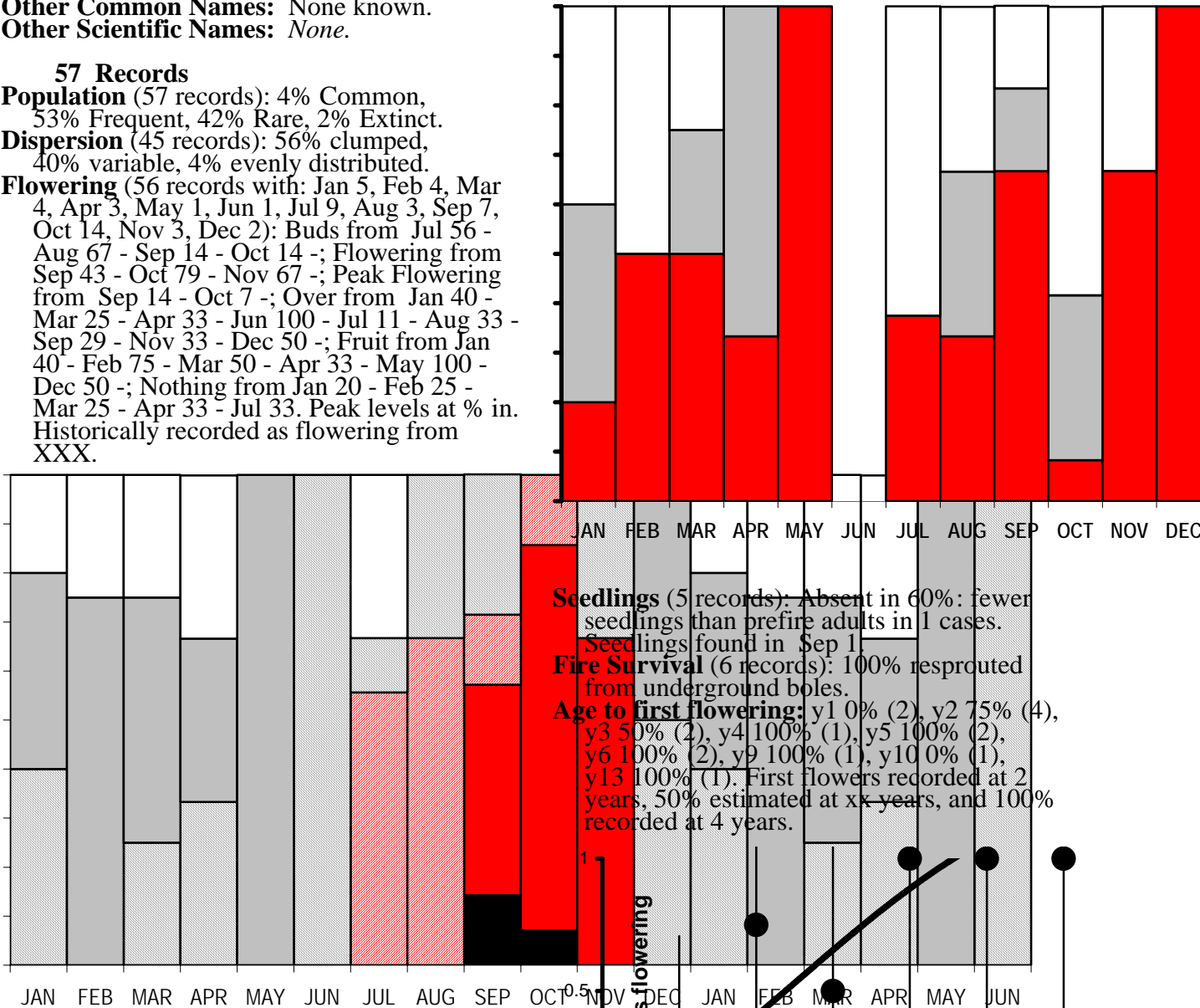
Other Common Names: None known.
Other Scientific Names: *None*.

57 Records

Population (57 records): 4% Common, 53% Frequent, 42% Rare, 2% Extinct.

Dispersion (45 records): 56% clumped, 40% variable, 4% evenly distributed.

Flowering (56 records with: Jan 5, Feb 4, Mar 4, Apr 3, May 1, Jun 1, Jul 9, Aug 3, Sep 7, Oct 14, Nov 3, Dec 2): Buds from Jul 56 - Aug 67 - Sep 14 - Oct 14 -; Flowering from Sep 43 - Oct 79 - Nov 67 -; Peak Flowering from Sep 14 - Oct 7 -; Over from Jan 40 - Mar 25 - Apr 33 - Jun 100 - Jul 11 - Aug 33 - Sep 29 - Nov 33 - Dec 50 -; Fruit from Jan 40 - Feb 75 - Mar 50 - Apr 33 - May 100 - Dec 50 -; Nothing from Jan 20 - Feb 25 - Mar 25 - Apr 33 - Jul 33. Peak levels at % in. Historically recorded as flowering from XXX.



Growth (51 records with: Jan 5, Feb 4, Mar 4, Apr 3, May 1, Jun 0, Jul 8, Aug 3, Sep 6, Oct 12, Nov 3, Dec 2): Much from Jan 20 - Feb 50 - Mar 50 - Apr 33 - May 100 - Jul 38 - Aug 33 - Sep 67 - Oct 8 - Nov 67 - Dec 100 -; Rare from Jan 40 - Mar 25 - Apr 67 - Aug 33 - Sep 17 - Oct 33 -; None from Jan 40 - Feb 50 - Mar 25 - Jul 63 - Aug 33 - Sep 17 - Oct 58 - Nov 33.

Height (56 records): 48% 0-0.2 m tall, 52% 0.2-1 m tall.

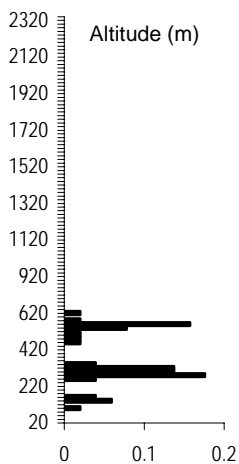
Pollinators (2 records): 50% bees or wasps, 50% flies.

Detailed Pollinators: No additional data.

Habitat:

Distance to Ocean (51 records): 65% inland - further than 2 km from coast.

Altitude (51 records): 80 - 620 m; 260_{lq} - 280_{med} - 300_{uq}m.



Landform (51 records): 78% deep soil, 12% rocky outcrops, 10% shallow soil.

Slope (51 records): 61% gentle incline, 31% steep incline, 4% platform, 2% hill top, 2% valley bottom.

Aspect (48 records): 65% South, 16% West, 15% East, 5% North.

LError! Bookmark not defined.

Soil Type (50 records): 88% sandy, 8% loamy, 2% peaty, 2% gravelly.

Soil Colour (49 records): 73% grey, 24% brown, 2% black.

Geology (51 records): 100% sandstone.

Vegetation (50 records): 100% shrubland.

Conservation Status and Threat:

Red Data List Status: Vulnerable D2(i,ii).

Occurrence (Fynbos): 31 km² with 60% conserved and 13% lost; Occupancy: 9 km² with 59% conserved and 10% lost. Fragmentation index: 20%.

Nature Reserves (51 records): 45% in nature reserves.

Habitat destruction (50 records): 100% extensive natural habitat.

Alien Invasive Species (48 records): 79% none, 19% Fabaceae (chiefly alien *Acacia*), 2% *Pinus*.

Alien Density (48 records): 79% alien-free, 17% sparse, 4% dense.

Cultivation & Utilization:

Picking (28 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

PVR95070506 FS The Se Coll F Survived The Fire By Being Protected By Rocks;

AGRY3090709 ID ! Atlassed As Se Coll C - But Is Se Coll F - The Creeping Form With A Rootstock ! Se Collina Collina Creeping Form - Not Like The Erect Form At The Summit ;;

AJT94100201 ID ! Identification Queried: Both Se Cyan And Se Coll F On Srs - No One Else Has Got Se Cyan Up Here - Rejected: Notes: Se Cyan Fvnn2 Secollc Fvbn1;

AKS94072004 ID ! Se Collina When Resprouting Is Difficult To Distinguish From Peucedanum Ferrulaceum;

PVR92102805 ID ! Identification Queried: Atlassed As Se Decu - But Is Se Collina - Specimen Seen - Changed;

PVR92102806 ID ! Identification Queried: Atlassed As Se Decu - But Is Se Collina - Specimen Seen - Changed;

PVR93061207 ID ! Sample Of Se Coll Also Attached - Confirmed;

PVR94080404 ID ! Atlassed As Se Coll - But Is Se Coll F - The Creeping Form With A Rootstock;

PVR95070506 ID ! Identification Queried: Atlassed As Se Decu - Is Se Coll;

PVR95070507 ID ! Identification Queried: Atlassed As Se Decu - Is Se Coll;

PVR95082304 ID ! Atlassed As Se Coll - Is Se Coll F - The Creeping Form With A Rootstock;

WIJ93092604 ID ! Atlassed As Se Coll C - But Is Se Coll F - The Creeping Form With A Rootstock - Specimen Seen;

WIJ94101603 ID ! Identification Query: Atlassed As Se Decu With Note: Se Collina Said To Be In This Area By Nature Conservation Officer (Ie An Summit Ridge) - Is Se Coll;

LYM97101102 NG Some Of The Se Coll Plants Had Red Leaves - Could This Be Stress ?;

AKS92080401 PN Was Formely Present On This 4wd Track Now Obliterated Is This A Case For " Search And Rescue " To Persuade The Owners To Prevent Vechiles Driving Straight Up The Slope? Erosion Is Worst Each Year;

AKS92080403 PN Was Rediscovered Here A Few Years Ago By Prof Jackson;

AKS94072004 PN At Least 10 On This Side Of Rooikrans Are Certainly Sc Collina But Will Check Again At Flowering Time;

AKS94072005 PN 28 Se Collina Counted;

PVR95070507 PN Only One Se Coll F (Se Decu) Was Found This Time - The Others Killed By The Fire ? - And This Was Looking A Bit Sick Reddish Signs Of Stress Survived By Being In A Rock Cleft;

AGRY3090709 PS Ld Coniferum Ld Salignum Se Collina Mainly In Bottom Half Of Plot;

NAHY4011801 PS This Could Be The Lowest Altitude That Se Coll Reaches In This Population;

PVR94080404 PS The Se Coll Are In A Band At About El 430;

WIJ96122604 PS To S Side Of Track Up The Ridge;

Confusing Species: Add.

Records of identification queries = 12

Records of corrected identification queries = 8 = 0.0%.

, SECOLLC, SEDECU , SEDECU , SEDECU , SEDECU , SECOLL , SECOLLC, SEDECU

Variation and Taxonomy: Add.

Distribution: Add.

INCLUDEPICTURE

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MERGEFORMAT \d

Serruria decipiens R.Br. 1810
Sandveld Spiderhead
Kinkelspinnekopbos

Other Common Names:

Sandveldkromspinnnekopbos,
Weskusspinnnekopbos.

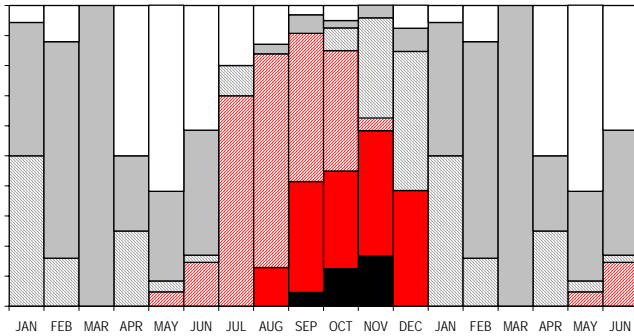
Other Scientific Names: *adscendens* var.
decipiens Hutch. 1912, *patula* (Thunb.)
 1781.

370 Records

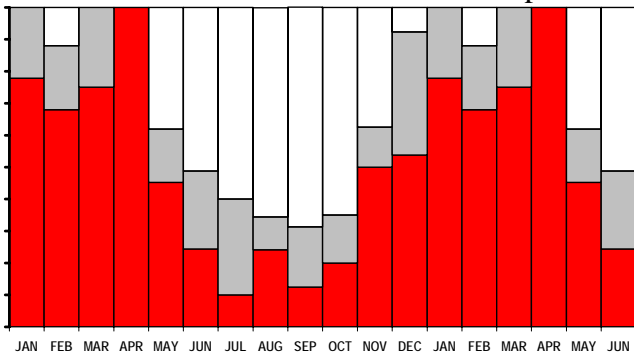
Population (366 records): 0.5% Abundant,
 26% Common, 50% Frequent, 24% Rare.

Dispersion (314 records): 73% variable,
 25% clumped, 2% widespread.

Flowering (367 records with: Jan 18, Feb 25,
 Mar 8, Apr 8, May 84, Jun 41, Jul 10, Aug
 31, Sep 65, Oct 40, Nov 24, Dec 13): Buds
 from Jul to Oct; Flowering from Sep to Dec;
 Peak Flowering not significant; Over from
 Nov to Jan and Apr; Fruit from Jan to Jun;
 Nothing from Apr to Jul. Peak levels at 96%
 in Nov. Historically recorded as flowering
 from XXX.



Growth (364 records with: Jan 18, Feb 25, Mar
 8, Apr 8, May 84, Jun 41, Jul 10, Aug 29,
 Sep 64, Oct 40, Nov 24, Dec 13): Much from
 Oct to Jun and Aug; Rare from Dec to Mar
 and Jun to Jul; None from May to Nov. Peak
 levels at 100% from Jan and Feb to Apr.



Seedlings (143 records): Absent in 97%: more
 seedlings than prefire adults in 2 cases.
 Seedlings found in Aug and Nov.

Fire Survival (16 records): 56% survived by
 seedlings only, 31% eliminated from the area
 by fires, 6% escaped fires in fire-safe areas,
 6% respouted from aerial trunks.

Age to first flowering: First flowers recorded
 at 1 years, 50% estimated at 3-4 years, and
 100% consistently recorded at 4 years.



Height (367 records): 3% 0-0.2 m tall,
 89% 0.2-1 m tall, 8% 1-2 m tall, 0.3% 2-5 m
 tall.

Pollinators (6 records): 50% butterflies or
 moths, 33% flies, 17% beetles.

Detailed Pollinators (3 records): Moth
 (unspecified), Carpenter Bee, African
 Monarch Butterfly.

Habitat:

Distance to Ocean (365 records): 99% inland -
 further than 2 km from coast.

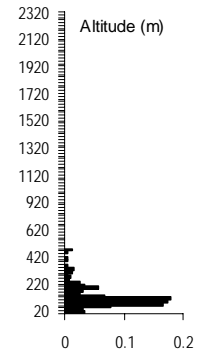
Altitude (365 records): 20 - 520 m; 60_{lq} - 100
 med - 100_{uq}m.

Landform (365 records):

99% deep soil,
 0.5% swamp, 0.3% riverine,
 0.3% lake edge,
 0.3% shallow soil.

Slope (363 records):
 55% platform, 31% gentle
 incline, 7% valley bottom,
 4% dunes, 3% hill top.

Aspect (198 records):
 37% West, 28% South,
 19% East, 17% North.



Soil Type (364
 records):
 97% sandy,
 2% loamy,
 0.3% clayey.

Soil Colour (362
 records):
 32% white,
 31% grey,
 15% brown,
 12% yellow,
 7% orange,
 2% red.

Geology (347 records): 76% Tertiary sands,
 23% sandstone, 1% shale, 0.3% granite.

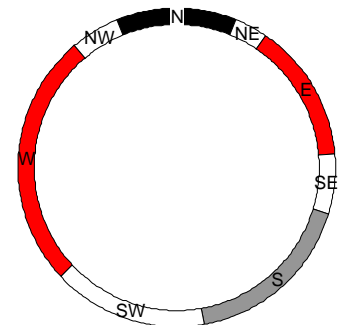
Vegetation (365 records): 99% shrubland,
 0.5% agricultural lands, 0.3% wooded
 grassland, 0.3% thicket, 0.3% suburban.

Conservation Status and Threat:

Red Data List Status: Vulnerable A2c+4c.

Occurrence (Fynbos): 4 216 km² with 2%
 conserved and 40% lost; Occupancy:
 437 km² with 7% conserved and 31% lost.
 Fragmentation index: 7%.

Nature Reserves (365 records): 13% in nature
 reserves - inadequately conserved.



Habitat destruction (362 records):
69% extensive natural habitat, 16% islands,
10% road verges, 2% naturally linear
habitats, 2% naturally fragmented habitats,
0.8% corridors.

Alien Invasive Species (359 records):
89% Fabaceae (chiefly alien *Acacia*),
9% none, 1% *Pinus*, 0.8% Myrtaceae,
0.3% other aliens.

Alien Density (359 records): 9% alien-free,
42% sparse, 28% abundant, 18% dense,
3% impenetrable.

Cultivation & Utilization:

Picking (305 records): 100% no sign of
picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

Were all in bud and flowering when they should
have been in cone in Dec! Dry autumn and
wet spring? (SMR98120213);

A very high number of small plants
(AGR91121206); Young plants present
(AGR92012201);

Much cattle damage (APE93060507); Partly
eaten - by cattle probably (CHE98052007);

Many plants dead (AGR91092901); Also 2
dead plants (SMRY0020901);

Regenerating well in cleared *A. cyclops* and
disturbed areas (AGR92012310);
In drainage lines, same area with heaviest
Acacia infestations! (AGR92072202);

Confusing Species: Confused with *S.*
"*piketbergensis*" (45% of cases, which is a
resprouter, but was not identified as separate
until well into the project), *S. fucifolia* (27%,
which has capitula), *S. fasciflora* (with
straight styles) and *S. glomerata* (which is
confined to the Peninsula).

Records of identification queries = 14.

Records of corrected identification queries = 11.

Variation and Taxonomy: No variation noted,
but as flowerhead size is indeterminate, these
vary from small in bad years and weak
plants, to exceptionally huge under ideal
conditions, to the extent that nearby plants
looks quite different.

Distribution: Add.

INCLUDEPICTURE

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MERGEFORMAT \d

Serruria glomerata (L.) R.Br. 1762, 1810
Cluster Spiderhead

Other Common Names: Samphire-leaf
Serruria.

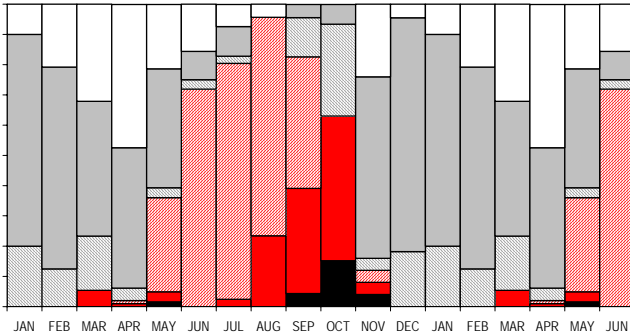
Other Scientific Names: *foeniculacea* Sieber ex Meisn 1856, *sphaerocephala* (Thunb) 1818.

529 Records

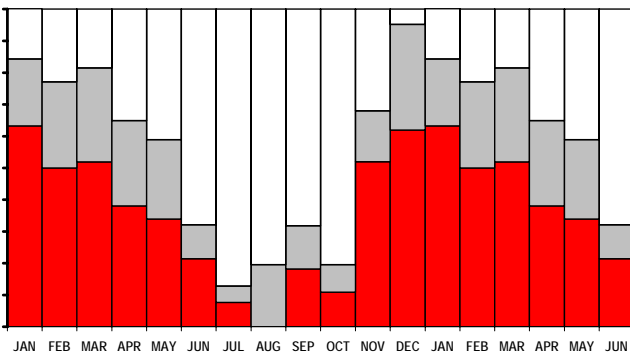
Population (524 records): 2% Abundant, 39% Common, 52% Frequent, 7% Rare, 0.2% Extinct.

Dispersion (510 records): 67% variable, 26% clumped, 6% widespread, 1% evenly distributed.

Flowering (518 records with: Jan 20, Feb 48, Mar 56, Apr 97, May 61, Jun 32, Jul 41, Aug 47, Sep 23, Oct 46, Nov 25, Dec 22): Buds from May to Sep; Flowering from Aug to Oct; Peak Flowering not significant; Over from Jan and Oct; Fruit from Nov to May; Nothing from Feb to May and Nov. Peak levels at 96% in Aug to Sep. Historically recorded as flowering from Aug to Oct.



Growth (501 records with: Jan 19, Feb 48, Mar 54, Apr 97, May 56, Jun 28, Jul 39, Aug 46, Sep 22, Oct 46, Nov 25, Dec 21): Much from Nov to Jun; Rare from Dec to May and Aug; None from Feb and Apr to Nov. Peak levels at 95% in Dec.



Seedlings (168 records): Absent in 70%: fewer seedlings than prefire adults in 19 cases, and more in 6 cases. Seedlings found in Feb (4), Mar (4), May, Jul (2), Aug (9), Sep (2) and Oct (3).

Fire Survival (37 records): 97% survived by seedlings only, 3% eliminated from the area by fires.

Age to first flowering: First flowers recorded at 1 years, 50% estimated at 2-4 years, and 100% recorded at 3 years.



Height (523 records): 10% 0-0.2 m tall, 89% 0.2-1 m tall, 1% 1-2 m tall.

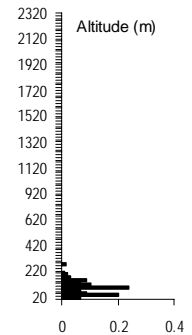
Pollinators (4 records): 50% bees or wasps, 50% beetles.

Detailed Pollinators (2 records): Honey Bee, Earwig.

Habitat:

Distance to Ocean (500 records): 54% coastal - less than 2 km from coast.

Altitude (500 records): 20 - 300 m; 20 *lq* - 60 *med* - 100 *ugm*.



Landform (494 records): 86% deep soil, 6% swamp, 5% shallow soil, 3% rocky outcrops, 0.6% riverine, 0.2% lake edge.

Slope (484 records): 45% platform, 38% gentle incline, 12% valley bottom, 3% steep incline, 1% hill top, 0.4% dunes.

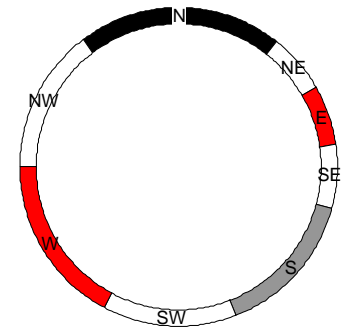
Aspect (279 records): 32% West, 31% North, 25% South, 12% East.

Soil Type (498 records): 87% sandy, 9% loamy, 3% peaty, 0.4% gravelly, 0.2% clayey.

Soil Colour (498 records): 63% grey, 17% white, 11% brown, 8% black, 0.6% yellow, 0.2% orange.

Geology (488 records): 93% sandstone, 5% Tertiary sands, 0.8% granite, 0.8% silcrete or ferricrete, 0.4% shale.

Vegetation (497 records): 96% shrubland, 2% plantations, 2% grassland, 0.2% forest, 0.2% suburban.



Conservation Status and Threat:

Red Data List Status: Vulnerable A2c.

Occurrence (Fynbos): 261 km² with 57% conserved and 34% lost; **Occupancy:** 145 km² with 65% conserved and 22% lost. **Fragmentation index:** 39%.

Nature Reserves (500 records): 91% in nature reserves - well conserved.

Habitat destruction (490 records): 90% extensive natural habitat, 5% islands,

4% naturally linear habitats, 0.4% naturally fragmented habitats, 0.2% road verges.

Alien Invasive Species (472 records): 52% none, 40% Fabaceae (chiefly alien *Acacia*), 5% *Pinus*, 2% Myrtaceae, 0.4% annual alien grasses, 0.2% *Hakea*, 0.2% other aliens.

Alien Density (472 records): 52% alien-free, 40% sparse, 6% abundant, 1% dense, 0.2% impenetrable.

Cultivation & Utilization:

Picking (368 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

From time to time poisoned by local authorities (CVV95091301);

Lots (20%) dead (AGRY0061101); 1 Dying off (GED99103001); 3 bushes dead (GED99110102); Only one dead plant found (MLOY0020801);

Occurs only in swampy areas here (AGR92050907); A bit out of place along

the dry slope; appears to be confined to disturbed area road (CVV99013101); On inside of vlei (CVVY1010207); At lower end of plot towards valley bottom (PMR99031101); Especially in wetter areas which the others avoid (TLE94061202); On flats near beach (LYM99040601); *S. glomerata* and *villosa* have quite distinct local distributions (PGD94021102);

Confusing Species: Rarely confused, mostly with *S. fasciflora* (with straight styles) and *S. villosa* (with neater leaves and single head). Records of identification queries = 7. Records of corrected identification queries = 5.

Variation and Taxonomy: No variation noted.

Distribution: Add.

INCLUDEPICTURE

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MERGEFORMAT \d

Serruria nervosa Meisn. 1856 Fluted Spiderhead

Other Common Names: Curly Spiderhead, *Spinnekopbossie*.

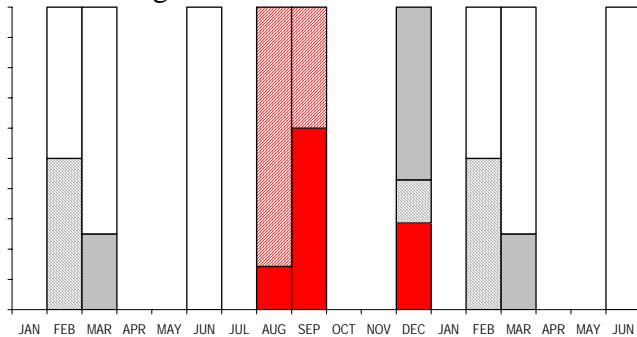
Other Scientific Names: *ventricosa* Phill & Hutch 1912.

53 Records

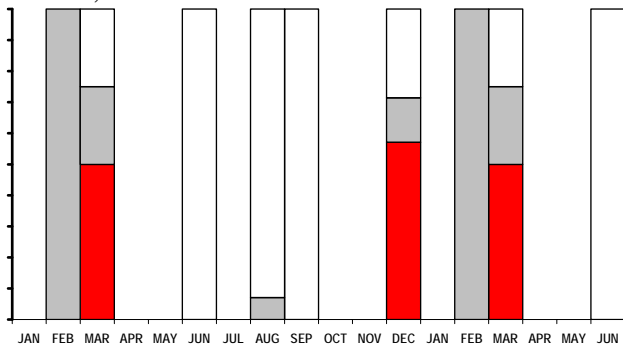
Population (52 records): 4% Abundant, 42% Common, 52% Frequent, 2% Rare.

Dispersion (42 records): 90% variable, 7% clumped, 2% widespread.

Flowering (43 records with: Jan 0, Feb 2, Mar 4, Apr 0, May 0, Jun 4, Jul 0, Aug 14, Sep 5, Oct 0, Nov 0, Dec 14): Buds from Aug to Sep; Flowering from Sep to Dec; Peak Flowering not recorded; Over from Feb; Fruit from Mar and Dec; Nothing from Feb to Jun. Peak levels unreliable at 100% from Aug to Sep. Historically recorded as flowering from Jul to Nov.



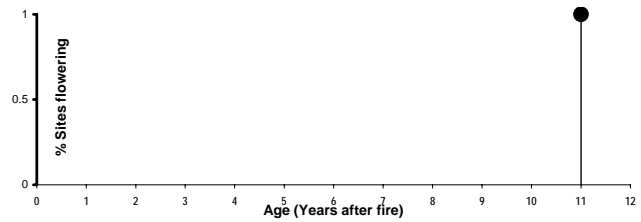
Growth (43 records with: Jan 0, Feb 2, Mar 4, Apr 0, May 0, Jun 4, Jul 0, Aug 14, Sep 5, Oct 0, Nov 0, Dec 14): Much from Mar and Dec; Rare from Feb to Mar; None from Mar to Dec. Peak levels unreliable at 100% in Feb,



Seedlings (8 records): All without any seedlings present.

Fire Survival : No data.

Age to first flowering: First flowers recorded at 11 years – no data from younger veld.



Height (43 records): 12% 0-0.2 m tall, 88% 0.2-1 m tall.

Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

Distance to Ocean (53 records): 98% inland - further than 2 km from coast.

Altitude (53 records): 20 - 180 m; 20 *lq* - 60 *med* - 60 *uq*m.

Landform (44 records):

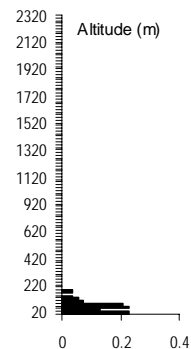
100% deep soil.

Slope (44 records):

52% platform, 36% gentle incline, 9% valley bottom, 2% hill top.

Aspect (24 records):

50% West, 29% South, 19% North, 2% East.



Soil Type (44 records):

80% sandy, 18% loamy, 2% peaty.

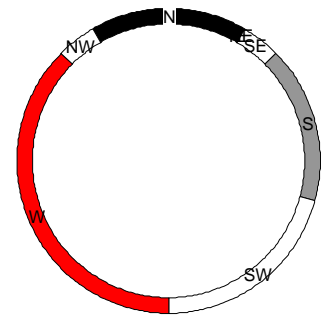
Soil Colour (44 records):

52% grey, 43% white, 2% black, 2% brown.

Geology (51 records):

45% Tertiary sands, 27% limestone, 22% sandstone, 4% shale, 2% silcrete or ferricrete.

Vegetation (53 records): 100% shrubland.



Conservation Status and Threat:

Red Data List Status: Near Threatened D2(i,ii).

Occurrence (Fynbos): 73 km² with 11% conserved and 18% lost; **Occupancy**: 45 km² with 13% conserved and 16% lost. **Fragmentation index**: 59%.

Nature Reserves (53 records): 21% in nature reserves.

Habitat destruction (42 records):

98% extensive natural habitat, 2% corridors.

Alien Invasive Species (43 records):

74% Fabaceae (chiefly alien *Acacia*), 16% none, 7% Myrtaceae, 2% *Pinus*.

Alien Density (43 records): 16% alien-free, 58% sparse, 19% abundant, 7% dense.

Cultivation & Utilization:**Picking** (32 records): 100% no sign of picking.**Cultivation Status:** No noted cultivation.**Atlassers Notes:** None.**Confusing Species:** Considered synonymous with *S. bolusii* until late in the atlas project, when atlassers pointed out the differences. Records of identification queries = 53.**Variation and Taxonomy:** Considered synonymous to *S. bolusii*, but differs in being

more erect and having reduced the number of headlets per flowerhead to one (occ. up to three). The tepal hairs are also usually spreading, rather than flat against the perianth as in *S. bolusii*. Both however, have the strongly fluted floral bracts.

Distribution: Add.

INCLUDEPICTURE

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MERGEFORMAT \d

Serruria "piketbergensis" (nomen nudum)
Piketberg Spiderhead

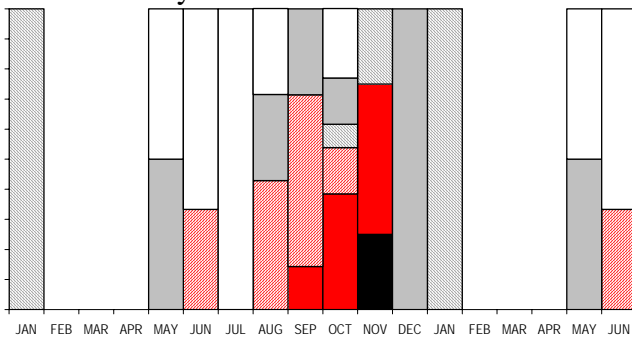
Other Common Names: None known.
Other Scientific Names: None.

44 Records

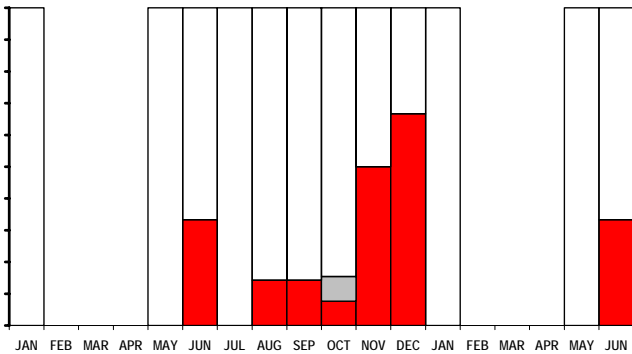
Population (43 records): 16% Common, 60% Frequent, 23% Rare.

Dispersion (36 records): 64% variable, 33% clumped, 3% evenly distributed.

Flowering (43 records with: Jan 3, Feb 0, Mar 0, Apr 0, May 2, Jun 3, Jul 1, Aug 7, Sep 7, Oct 13, Nov 4, Dec 3): Buds from Jun to Sep; Flowering from Oct to Nov; Peak Flowering from Nov; Over from Nov and Jan; Fruit from May and Aug to Sep and Dec; Nothing from May to Aug and Oct. Peak levels unreliable at 100% in Nov. Historically not recorded.



Growth (43 records with: Jan 3, Feb 0, Mar 0, Apr 0, May 2, Jun 3, Jul 1, Aug 7, Sep 7, Oct 13, Nov 4, Dec 3): Much from Jun and Nov to Dec; Rare not significant; None from all year round. Peak levels unreliable at 67% in Dec.



Seedlings (22 records): All without any seedlings present.

Fire Survival (8 records): 100% resprouted from underground boles.

Age to first flowering: First flowers recorded at 2 years, 50% estimated at 3 years, and 100% consistently recorded at 6 years.



Height (43 records): 30% 0-0.2 m tall, 70% 0.2-1 m tall.

Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

Distance to Ocean (43 records): 100% inland - further than 2 km from coast.

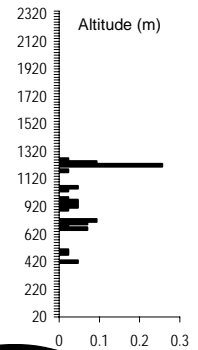
Altitude (43 records): 400 - 1160 m; 680_{lq} - 840_{med} - 1120_{uq}m.

Landform (43 records):

88% deep soil, 5% swamp, 5% shallow soil, 2% rocky outcrops.

Slope (41 records): 54% gentle incline, 32% platform, 5% steep incline, 5% hill top, 5% valley bottom.

Aspect (35 records): 43% South, 23% North, 23% East, 11% West.

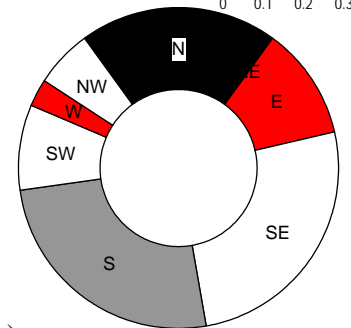


Soil Type (43 records): 72% sandy, 23% loamy, 5% peaty.

Soil Colour (43 records): 51% grey, 30% brown, 14% white, 5% black.

Geology (41 records): 95% sandstone, 5% shale.

Vegetation (43 records): 100% shrubland.



Conservation Status and Threat:

Red Data List Status: Near Threatened D2(i). Occurrence (Fynbos): 316 km² with 17% conserved and 13% lost; Occupancy: 43 km² with 32% conserved and 5% lost. Fragmentation index: 6%.

Nature Reserves (43 records): 63% in nature reserves - well conserved.

Habitat destruction (43 records): 88% extensive natural habitat, 9% islands, 2% naturally fragmented habitats.

Alien Invasive Species (42 records): 74% none, 21% *Pinus*, 2% Fabaceae (chiefly alien *Acacia*), 2% Myrtaceae.

Alien Density (42 records): 74% alien-free, 21% sparse, 5% abundant.

Cultivation & Utilization:

Picking (33 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

One plant had a complete trailing stem stripped of its leaves by what is believed to be a rodent (NGF96050102);

Confusing Species: This is the only resprouting Curly Spiderhead on the west coast, and its range is quite disjunct from *S. rubricaulis*, from which it can be told by its black bracts and more erect habit. Records of identification queries = 7.

Variation and Taxonomy: No variation noted. This is clearly related to *S. decipiens*, but is a resprouter with brown-black involucre bracts. Superficially it resembles *S. rubricaulis*, but it is a more erect plant with distinctive bracts.

Distribution: Add.

INCLUDEPICTURE

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MERGEFORMAT \d

Serruria roxburghii R.Br. 1810 Short-leaf Spiderhead

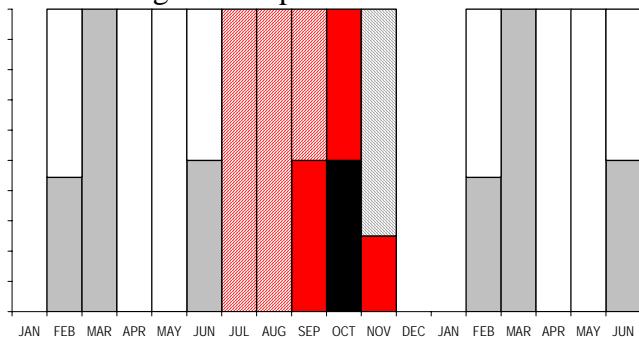
Other Common Names: None known.
Other Scientific Names: *triternata* Thib ex Meisn. 1856.

41 Records

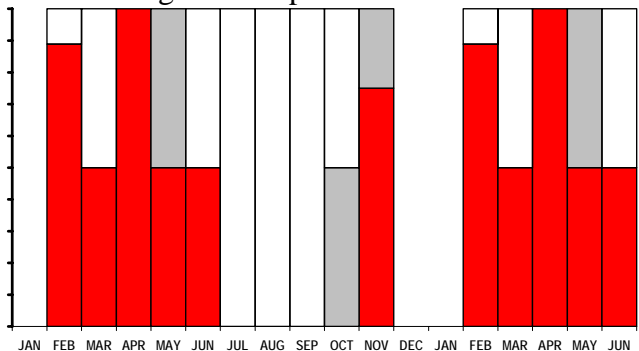
Population (40 records): 33% Common, 48% Frequent, 18% Rare, 3% Extinct.

Dispersion (38 records): 68% variable, 29% clumped, 3% evenly distributed.

Flowering (40 records with: Jan 0, Feb 9, Mar 2, Apr 1, May 2, Jun 2, Jul 8, Aug 4, Sep 2, Oct 2, Nov 8, Dec 0): Buds from Jul 100 - Aug 100 - Sep 50 -; Flowering from Sep 50 - Oct 50 - Nov 25 -; Peak Flowering from Oct 50 -; Over from Nov 75 -; Fruit from Feb 44 - Mar 100 - Jun 50 -; Nothing from Feb 56 - Apr 100 - May 100 - Jun 50. Peak levels at % in. Historically recorded as flowering from Sep to Nov.



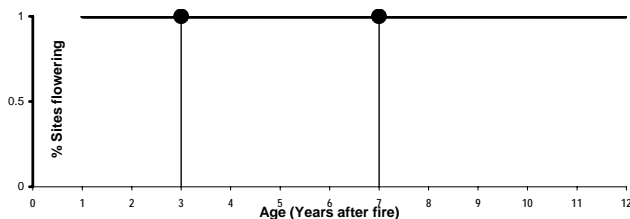
Growth (40 records with: Jan 0, Feb 9, Mar 2, Apr 1, May 2, Jun 2, Jul 8, Aug 4, Sep 2, Oct 2, Nov 8, Dec 0): Much from Feb 89 - Mar 50 - Apr 100 - May 50 - Jun 50 - Nov 75 -; Rare from May 50 - Oct 50 - Nov 25 -; None from Feb 11 - Mar 50 - Jun 50 - Jul 100 - Aug 100 - Sep 100 - Oct 50.



Seedlings (19 records): Absent in 89%: fewer seedlings than prefire adults in 1 case. Seedlings found in Sep.

Fire Survival (4 records): 100% survived by seedlings only.

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



Height (40 records): 3% 0-0.2 m tall, 88% 0.2-1 m tall, 10% 1-2 m tall.

Pollinators (4 records): 50% butterflies or moths, 50% beetles.

Detailed Pollinators (3 records): Painted Lady Butterfly, Monkey Beetle, Blues Butterfly.

Habitat:

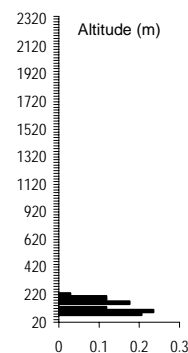
Distance to Ocean (34 records): 100% inland - further than 2 km from coast.

Altitude (34 records): 60 - 220 m; 80_{lq} - 100_{med} - 100_{uq}m.

Landform (34 records): 100% deep soil.

Slope (34 records): 74% platform, 18% gentle incline, 9% valley bottom.

Aspect (13 records): 73% West, 15% North, 8% East, 4% South.



Soil Type (34 records): 91% sandy, 9% loamy.

Soil Colour (34 records): 32% brown, 24% yellow, 15% grey, 15% orange, 12% white, 3% red.

Geology (33 records): 73% Tertiary sands, 12% sandstone, 12% shale, 3% granite.

Vegetation (34 records): 100% shrubland.

Conservation Status and Threat:

Red Data List Status: Endangered A2c, B1a(i)b(i,ii,iii,iv,v) + 2a(i)b(i,ii,iii,iv,v).

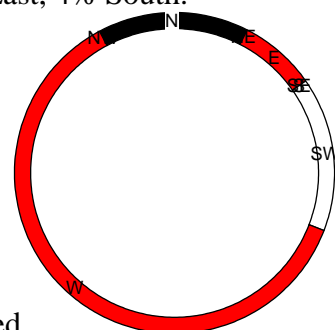
Occurrence (Fynbos): 41 km² with 0% conserved and 57% lost; **Occupancy:** 29 km² with 0% conserved and 75% lost. **Fragmentation index:** 11%.

Nature Reserves (34 records): 0% in nature reserves - unconserved.

Habitat destruction (33 records): 48% extensive natural habitat, 42% islands, 3% road verges, 3% naturally linear habitats, 3% naturally fragmented habitats.

Alien Invasive Species (34 records): 82% Fabaceae (chiefly alien *Acacia*), 9% *Pinus*, 6% none, 3% annual alien grasses.

Alien Density (34 records): 6% alien-free, 21% sparse, 41% abundant, 32% dense.



Cultivation & Utilization:**Picking** (36 records): 100% no sign of picking.**Cultivation Status:** No noted cultivation.**Atlassers Notes:**

Interfire recruitment (LYM97112602); Many young plants - interfire recruitment (SMR97112602);

Half Of Plants Dead - Mainly In Denser Stands Of Aliens 100-150 Live Seen (AGRY0072701); 50% dead (VCH98051401);

About 600 plants (AGRY0072703); About 600 plants (AGRY0072706); About 15 plants (AGRY0072710); Despite a good search none found area badly waterlogged aliens need to be cleared (AGRY1091301); Approx. 600 plants on this plot (LYM97112602); About 600 plants

(SMR97112601); About 800 plants (SMR97112602); Population approx. 800 (SMRY0072702); Population approx. 400 (SMRY0072703); Population approx. 20 (SMRY0072705);

Confusing Species: None noted, although *S. glomerata* could be easily confused it is geographically separate.
Records of identification queries = 1.**Variation and Taxonomy:** No variation noted.**Distribution:** Add.

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Serruria rubricaulis R.Br. 1810
Red-stem Spiderhead

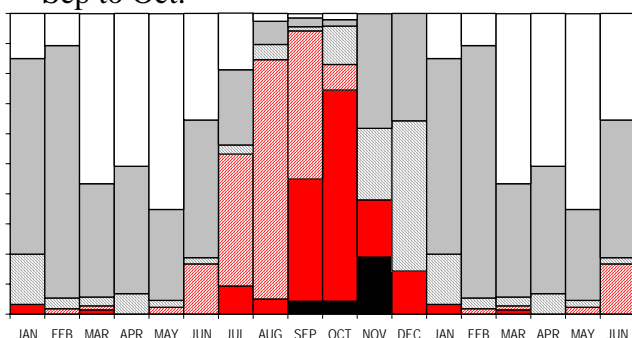
Other Common Names: None known.
Other Scientific Names: None.

578 Records

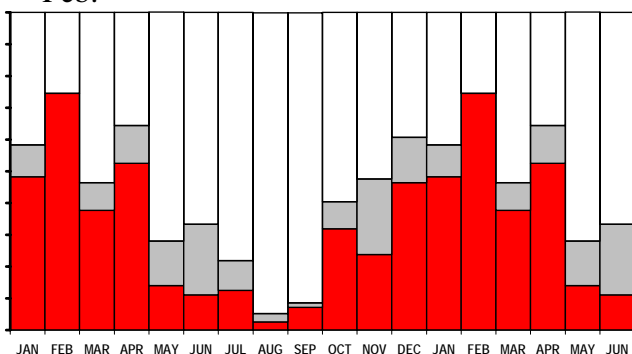
Population (574 records): 0.5% Abundant, 28% Common, 53% Frequent, 18% Rare.

Dispersion (524 records): 70% variable, 25% clumped, 4% widespread, 1.0% evenly distributed.

Flowering (571 records with: Jan 60, Feb 56, Mar 69, Apr 59, May 43, Jun 48, Jul 32, Aug 39, Sep 69, Oct 47, Nov 21, Dec 28): Buds from Jul to Sep; Flowering from Sep to Oct; Peak Flowering from Nov; Over from Nov to Dec; Fruit from Nov to Jul; Nothing from Mar to Jun. Peak levels at 95% from Sep to Oct. Historically recorded as flowering from Sep to Oct.



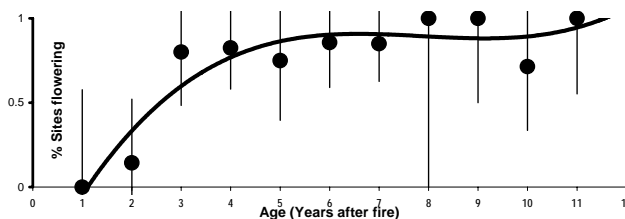
Growth (566 records with: Jan 60, Feb 55, Mar 69, Apr 59, May 43, Jun 45, Jul 32, Aug 38, Sep 69, Oct 47, Nov 21, Dec 28): Much from Oct to Apr; Rare from Jun and Nov; None from all year round. Peak levels at 75% in Feb.



Seedlings (249 records): Absent in 93%; fewer seedlings than prefire adults in 6 cases, and more in 3 cases. Seedlings found in Jan (3), Feb (3), Apr (2) and Sep.

Fire Survival (57 records): 98% resprouted from underground boles, 2% survived by seedlings only.

Age to first flowering: First flowers recorded at 2 years, 50% estimated at 2-3 years, and 100% recorded at 8 years.



Height (571 records): 33% 0-0.2 m tall, 66% 0.2-1 m tall, 0.4% 1-2 m tall.

Pollinators: No data.

Detailed Pollinators: No additional data.

Habitat:

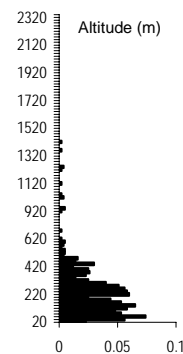
Distance to Ocean (568 records): 67% inland - further than 2 km from coast.

Altitude (568 records): 20 - 1320 m; 80 l_q - 180 med - 260 uq_m .

Landform (565 records): 90% deep soil, 5% shallow soil, 3% rocky outcrops, 1% swamp, 0.2% riverine.

Slope (564 records): 64% gentle incline, 20% steep incline, 9% platform, 5% hill top, 2% valley bottom, 0.5% dunes.

Aspect (503 records): 42% South, 22% East, 19% North, 16% West.



Soil Type (563 records):

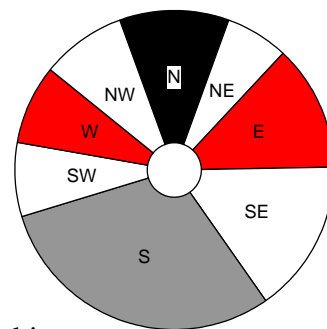
73% sandy, 17% loamy, 6% gravelly, 2% clayey, 2% rocky, 1% peaty.

Soil Colour (562 records):

73% grey, 11% brown, 8% white, 3% black, 2% yellow, 2% orange, 0.2% red.

Geology (540 records): 89% sandstone, 6% shale, 3% Tertiary sands, 0.9% silcrete or ferricrete, 0.6% limestone, 0.4% conglomerate, 0.2% granite.

Vegetation (564 records): 99% shrubland, 0.5% plantations, 0.2% wooded grassland, 0.2% thicket, 0.2% agricultural lands, 0.2% suburban.



Conservation Status and Threat:

Red Data List Status: Near Threatened A2c. Occurrence (Fynbos): 1 762 km² with 27% conserved and 32% lost; Occupancy: 465 km² with 27% conserved and 24% lost. Fragmentation index: 17%.

Nature Reserves (568 records): 35% in nature reserves.

Habitat destruction (558 records): 92% extensive natural habitat, 4% islands,

1% naturally linear habitats, 0.7% road verges, 0.7% naturally fragmented habitats, 0.4% patches, 0.2% corridors.

Alien Invasive Species (555 records):

36% *Pinus*, 25% none, 23% Fabaceae (chiefly alien *Acacia*), 10% *Hakea*, 6% Myrtaceae, 0.2% other aliens.

Alien Density (555 records): 25% alien-free, 54% sparse, 14% abundant, 6% dense, 1% impenetrable.

Cultivation & Utilization:

Picking (404 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

On drier areas of vlel site (MAJ97091401);

Confusing Species:

S. adscendens (55% of cases, with a single stem: although usually white stemmed, red stems are not a consistent diagnostic feature for *S. rubricaulis*), occasionally with *S. elongata* (much more robust leaves, not resprouting), *S. fasciflora* (straight styles, not resprouting), *S. ludwigii* (a resprouter with capitula), and rarely with *S. nervosa* (not resprouting), *S. gremialis* (a resprouter with capitula) and *S. meisneriana* (with long-stalked flowerheads, not resprouting).

Records of identification queries = 43.

Records of corrected identification queries = 20.

Variation and Taxonomy: No variation known, other than eastern populations tend to have fluted floral bracts. In Flora Capensis this was incorrectly sunk into *S. adscendens*.

Distribution: Add.

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