

Vexatorella Rourke 1984
Vexators

Anything specific to go in here?

First recognized in 1984 by John Rourke, this group was previously regarded by Rourke (1972) as the section *Xericola* of *Leucospermum*. This section was an anomaly in *Leucospermum* as it had terminal flowerheads, although *L. secundifolium* was also placed here. Interestingly Salisbury placed it in the Conebushes based on its terminal heads – he only described the “males”, and so presumably never noted the fruit.

Vexatorella alpina (Salisb. ex Kn.) Rourke 1809, 1984
Kamiesberg Vexator

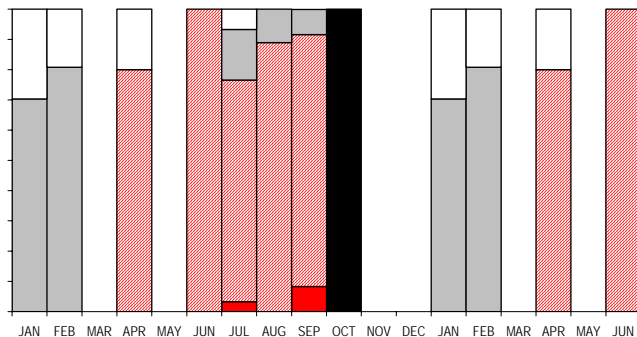
Other Common Names: Alpine Protea,
Knoppiesbos.
Other Scientific Names: *cartilagineum* (RBr)
 1810.

138 Records

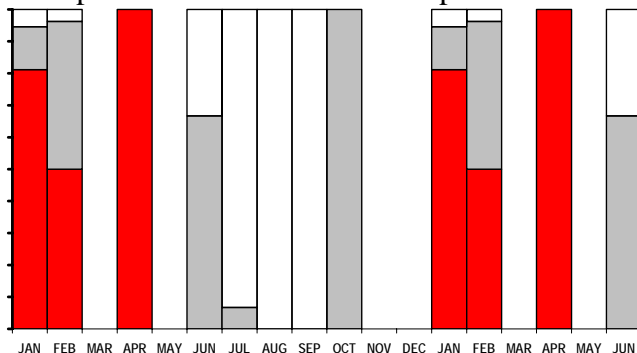
Population (138 records): 44% Common,
 43% Frequent, 13% Rare.

Dispersion (134 records): 73% variable,
 26% clumped, 0.7% widespread.

Flowering (136 records with: Jan 37, Feb 26,
 Mar 0, Apr 5, May 0, Jun 15, Jul 30, Aug 9,
 Sep 12, Oct 2, Nov 0, Dec 0): Buds from Apr
 to Sep; Flowering from Sep; Peak Flowering
 from Oct; Over not recorded; Fruit from Jan
 to Feb 81 and Jul to Aug; Nothing from Jan
 to Apr. Peak levels at 100% in May and Oct.
 Historically recorded as flowering from Sep
 to Dec.



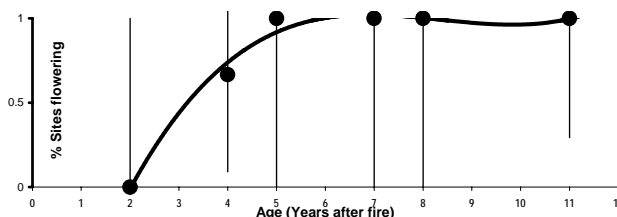
Growth (135 records with: Jan 37, Feb 26, Mar
 0, Apr 5, May 0, Jun 15, Jul 30, Aug 8, Sep
 12, Oct 2, Nov 0, Dec 0): Much from Jan to
 Apr; Rare from Oct to Jul; None from Jun to
 Sep. Peak levels at 100% in Apr and Oct.



Seedlings (101 records): Absent in 90%: fewer
 seedlings than prefire adults in 3 cases, and
 more in 2 cases. Seedlings found in Apr (5).

Fire Survival (22 records): 91% survived by
 seedlings only, 5% eliminated from the area
 by fires, 5% resprouted from underground
 boles.

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



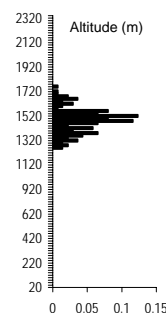
Height (138 records): 1% 0-0.2 m tall,
 38% 0.2-1 m tall, 50% 1-2 m tall, 11% 2-5 m
 tall.

Pollinators (1 record): flies.
Detailed Pollinators: No additional data.

Habitat:

Distance to Ocean (138 records):
 100% inland - further than 2
 km from coast.

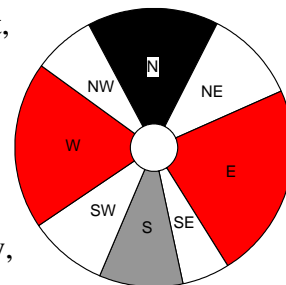
Altitude (138 records): 1140 -
 1660 m; 1300 *lq* - 1380 *med* -
 1400 *uq*m.



Landform (137 records):
 47% deep soil, 45% shallow
 soil, 7% rocky outcrops,
 0.7% riverine.

Slope (137 records): 46% gentle incline,
 39% steep incline, 11% hill top,
 4% platform, 0.7% valley bottom.

Aspect (123 records):
 32% East, 29% West,
 23% North,
 17% South.



Soil Type (136
 records):
 51% loamy,
 41% sandy,
 4% rocky, 2% clayey,
 1% gravelly.

Soil Colour (134 records): 40% brown,
 33% orange, 16% grey, 9% red, 1% black,
 0.7% yellow.

Geology (137 records): 99% granite,
 0.7% sandstone, 0.7% shale.

Vegetation (137 records): 99% shrubland,
 0.7% agricultural lands.

Conservation Status and Threat:

Red Data List Status: Near Threatened
 B1a(i)b(iii,v).

Occurrence (Fynbos): 36 km² with 0 %
 conserved and no data on area lost;
Occupancy: 104 km² with 0 % conserved
 and no data on area lost. Fragmentation
 index: 30%.

Nature Reserves (138 records): 0% in nature
 reserves - unconserved.

Habitat destruction (137 records):
 92% extensive natural habitat, 4% naturally
 fragmented habitats, 4% islands.

Alien Invasive Species (136 records):
 99% none, 0.7% other aliens.

Alien Density (136 records): 99% alien-free,
 0.7% sparse.

Cultivation & Utilization:

Picking (128 records): 98% no sign of picking, 2% lightly picked.

Cultivation Status: No noted cultivation.

Witch's Broom Infestation: 2 records (1%).

Atlassers Notes:

Height: Reaching over 2 m tall: (AGR97070502); Population includes a couple of massive old plants bordering on 2 m tall (SHR97083101).

Diameter: Up to 3 m across (WIJ92071701, WIJ92071707); Single plant of 10 m diameter of which northern half had died (AGRY4090901).

Age distribution: Some young, some giants (AGRY4091001); A large and healthy population with a good scattering of size classes - lots of small plants - although many small plants dead (AGRY4091103); About 5% of population are large dead specimens which appear to have senesced - some very large plants with no cones (NAH92040501); Very few seedlings with large burnt adults in this small area that is regularly burnt by the community to provide grazing: surrounded by older veld no plants of flowering age as yet although surrounding population has buds (NAH92040602); About 2000 plants: no dead - all healthy (AGR98013110); Some young plants but about 30% of mature are dead (AGR98013113); Seedlings very rare: < 1% (NAH92040501); Very common in the area and reproducing well (NAH92040601); Young veld with many young plants (NAH92040603); Young plants just about equal in number to adult plants (NAH92040701); Plants are quite old spreading plants - some dead ones but no evidence of fire (WMP98013102); Quite a few large old dead plants - no sign of fire (WMP98013104+5); One mature and one

dead/burnt plant with lots of young plants close by (WMP98013107).

Habitat: In river courses! (AGR98013106); Prefers deep soils in saddles at low altitudes (AGR98013119); Shallow soil patches only (AGR98020111); None on south side of slope where more clay and more Renosterveldty (AGRY4091001); In riverine sandy patch on valley bottom (AGRY4091003); Just above huge granite slabs - strange not present in better habitat to north - but this obviously yields better water? (AGRY4091006); Clumps twist granite domes! (AGRY4091101+2); Older plants in a single clump in a neck between huge granite slabs (AGRY4091104); In clumps between the huge granite slabs of the mountainside (WIJ92071705).

Parasites: Covered with *Viscum* and Dodder: veld old - plants dying (AGR98013121); with *Viscum* (AGR97070604, AGR98013132, AGRY4091003), with Mistletoe (NAH92040501); Witches Broom-type growth on leaves (PGD98072201); Cancerous malformation of flowerhead noted on a few plants (FBH97091502).

Exploitation: 2 killed and totally chopped out for firewood - huge stems (AGR97070601); 5 plants killed for firewood (AGR97070604).

Misc: Ladybirds and snout beetles found in old flowerheads (LYM98013102).

Confusing Species: None.

Records of identification queries = 3

Variation and Taxonomy: None noted.

Distribution: Add.

INCLUDEPICTURE

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MERGEFORMAT \d

Vexatorella amoena (Rourke) Rourke 1972, 1984 Swartruggens Vexator

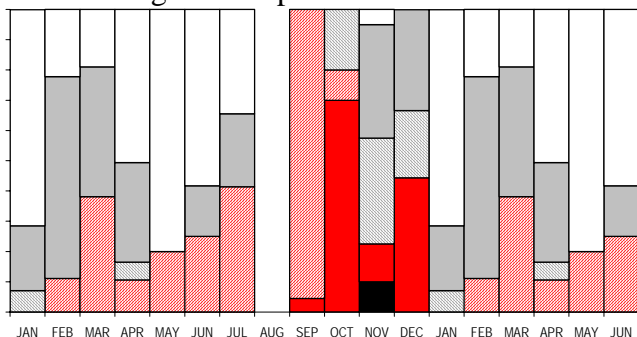
Other Common Names: *Vaalbos*.
Other Scientific Names: *None*.

280 Records

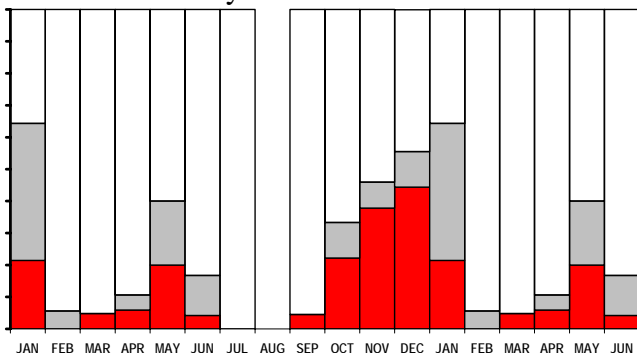
Population (278 records): 23% Common, 66% Frequent, 10% Rare, 0.7% Extinct.

Dispersion (259 records): 73% variable, 24% clumped, 2% widespread, 0.4% evenly distributed.

Flowering (277 records with: Jan 14, Feb 18, Mar 21, Apr 85, May 5, Jun 24, Jul 29, Aug 0, Sep 22, Oct 10, Nov 40, Dec 9): Buds from Mar to Oct; Flowering from Oct to Dec; Peak Flowering from Nov; Over from Oct to Dec; Fruit from Nov to Apr and Jul; Nothing from Jan to Jul. Peak levels at 100% in Sep to Oct. Historically recorded as flowering from Sep to Nov.



Growth (272 records with: Jan 14, Feb 18, Mar 21, Apr 85, May 5, Jun 24, Jul 28, Aug 0, Sep 22, Oct 9, Nov 37, Dec 9): Much from Oct to Jan and May; Rare from Jan and May; None from all year round. Peak levels at 64% in January.



Seedlings (105 records): Absent in 98%; fewer seedlings than prefire adults in 1 cases. Seedlings found in Sep 1.

Fire Survival (19 records): 47% eliminated from the area by fires, 21% escaped fires in fire-safe areas, 16% survived by seedlings only, 16% resprouted from underground boles.

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



Height (276 records): 9% 0-0.2 m tall, 89% 0.2-1 m tall, 2% 1-2 m tall.

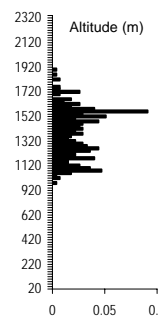
Pollinators : No data.

Detailed Pollinators: No additional data.

Habitat:

Distance to Ocean (274 records): 100% inland - further than 2 km from coast.

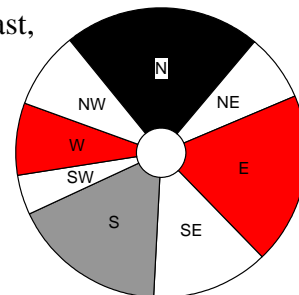
Altitude (274 records): 860 - 1800 m; 1100 *lq* - 1280 *med* - 1420 *uq*m.



Landform (271 records): 50% shallow soil, 48% deep soil, 3% rocky outcrops.

Slope (271 records): 68% gentle incline, 15% steep incline, 9% hill top, 6% platform, 0.4% cliff, 0.4% valley bottom.

Aspect (247 records): 31% North, 29% East, 27% South, 14% West.



Soil Type (272 records): 35% sandy, 23% loamy, 20% gravelly, 19% rocky, 2% clayey.

Soil Colour (272 records): 40% brown, 29% grey, 14% yellow, 9% orange, 7% white, 1% red.

Geology (253 records): 78% sandstone, 22% shale, 0.4% silcrete or ferricrete.

Vegetation (271 records): 100% shrubland.

Conservation Status and Threat:

Red Data List Status: Least Concern.

Occurrence (Fynbos): 1 539 km² with 6 % conserved and 5 % lost; Occupancy: 320 km² with 1 % conserved and 2 % lost. Fragmentation index: 17%.

Nature Reserves (274 records): 0% in nature reserves - unconserved.

Habitat destruction (270 records): 94% extensive natural habitat, 5% islands, 0.7% naturally linear habitats, 0.4% naturally fragmented habitats.

Alien Invasive Species (260 records): 85% none, 13% *Pinus*, 0.8% Fabaceae (chiefly alien *Acacia*), 0.8% other aliens.

Alien Density (260 records): 85% alien-free, 13% sparse, 2% abundant, 0.4% dense.

Cultivation & Utilization:

Picking (192 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Witch's Broom Infestation: 1 records (0.4%).

Atlassers Notes:

Leaves too long; these measured 35-40 mm by 9 mm (NGF99042504); Some leaves were multi-toothed! (WIJ99042607).

Confusing Species: Some identification errors with *V. obtusata subsp. obtusata* noted.

Records of identification queries = 6

Records of corrected identification queries = 2.

Variation and Taxonomy: None noted.

Distribution: Add.

INCLUDEPICTURE

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***Vexatorella latebrosa* Rourke**
Robertson Vexator

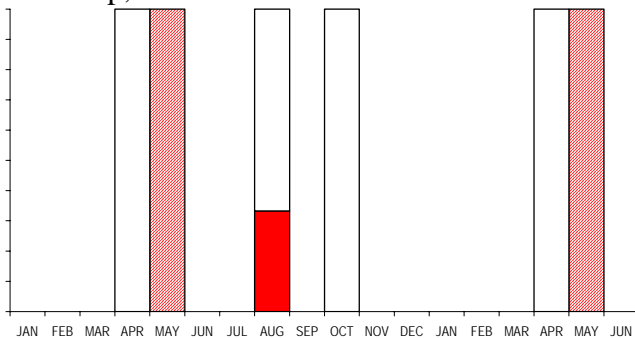
Other Common Names: None known.
Other Scientific Names: *None*.

7 Records

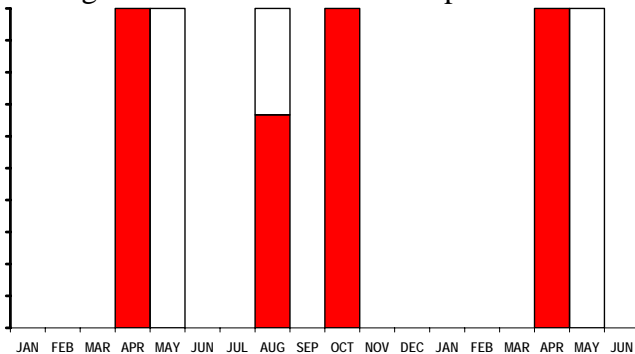
Population (7 records): 43% Common, 29% Frequent, 29% Rare.

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

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



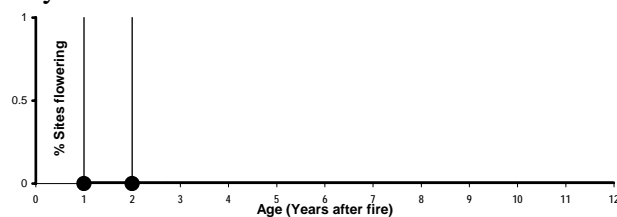
Growth (7 records with: Jan 0, Feb 0, Mar 0, Apr 2, May 1, Jun 0, Jul 0, Aug 3, Sep 0, Oct 1, Nov 0, Dec 0): Much from Apr, Aug and Oct; Rare not recorded; None from May and Aug. Peak levels at 100% in Apr and Oct.



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

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

Age to first flowering: Not yet flowered at 2 years: no additional data.



Height (7 records): 43% 0-0.2 m tall, 29% 0.2-1 m tall, 29% 1-2 m tall.

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

Detailed Pollinators: Bees and black, hairy beetles (SHR93080101).

Habitat:

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

Altitude (6 records): 520 - 580 m; 520_{lq} - 540_{med} - 540_{uq} m.

Landform (6 records): 100% deep soil.

Slope (6 records): 83% steep incline, 17% gentle incline.

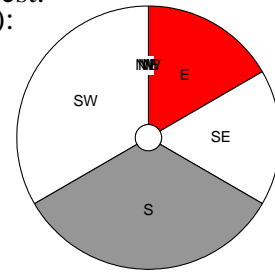
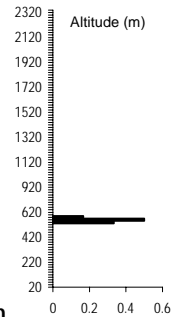
Aspect (6 records): 67% South, 17% East, 17% West.

Soil Type (6 records): 100% loamy.

Soil Colour (6 records): 83% brown, 17% red.

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

Vegetation (6 records): 100% shrubland.



Conservation Status and Threat:

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

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

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

Habitat destruction (6 records): 100% extensive natural habitat.

Alien Invasive Species (6 records): 100% none.

Alien Density (6 records): 100% alien-free.

Cultivation & Utilization:

Picking (6 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Atlassers Notes:

Main trunks about 50 mm in diameter 10 years later (SHR93052103);

Flowers sweetly scented (SHR93080101);

Altitude about 460 m and not as high as 520 m based on altimeter (WIJY0100107).

Confusing Species: None noted.

Records of identification queries = 1.

Variation and Taxonomy: None noted.

Distribution: Add.

INCLUDEPICTURE

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Vexatorella obtusata ssp. albomontana (Rourke) Rourke 1972, 1984
Witteberg Vexator

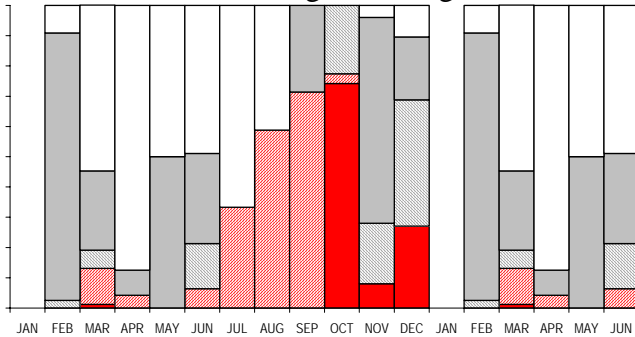
Other Common Names: None known.
Other Scientific Names: *None*.

446 Records

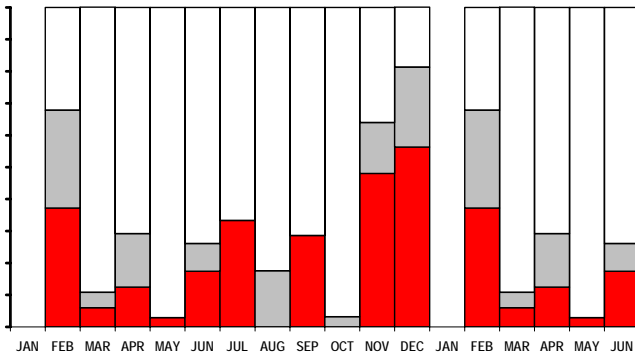
Population (444 records): 21% Common, 64% Frequent, 15% Rare.

Dispersion (414 records): 68% variable, 26% clumped, 5% widespread, 1% evenly distributed.

Flowering (441 records with: Jan 0, Feb 121, Mar 84, Apr 24, May 34, Jun 47, Jul 3, Aug 17, Sep 7, Oct 31, Nov 25, Dec 48): Buds from Jul to Sep; Flowering from Oct and Dec; Peak Flowering not noted; Over from Oct to Dec; Fruit from Nov to Mar and May to Jun and Sep; Nothing from Mar to Aug. Peak levels at 100% in Oct. Historically recorded as flowering from Aug to Nov.



Growth (441 records with: Jan 0, Feb 121, Mar 84, Apr 24, May 35, Jun 46, Jul 3, Aug 17, Sep 7, Oct 31, Nov 25, Dec 48): Much from Nov to Feb and Jul and Sep; Rare from Dec to Feb; None from Feb to Nov. Peak levels at 81% in Dec.



Seedlings (198 records): All without any seedlings present.

Fire Survival (12 records): 58% survived by seedlings only, 25% escaped fires in fire-safe areas, 17% resprouted from underground boles.

Age to first flowering: First flowers recorded at 9 years (no data for younger veld) at 100%.



Height (440 records): 3% 0-0.2 m tall, 85% 0.2-1 m tall, 12% 1-2 m tall, 0.5% 2-5 m tall.

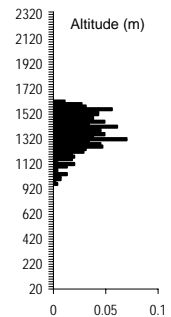
Pollinators (14 records): 36% butterflies or moths, 36% bees or wasps, 21% beetles, 7% flies.

Detailed Pollinators (4 records): Heady Maiden Moth (3), Honey Bee.

Habitat:

Distance to Ocean (446 records): 100% inland - further than 2 km from coast.

Altitude (446 records): 840 - 1520 m; 1160 *lq* - 1260 *med* - 1340 *uq*m.



Landform (443 records): 64% shallow soil, 33% deep soil, 3% rocky outcrops, 0.2% riverine.

Slope (445 records): 48% steep incline, 29% gentle incline, 17% hill top, 2% platform, 2% cliff, 0.2% valley bottom.

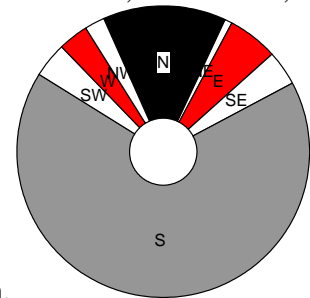
Aspect (383 records): 71% South, 15% North, 8% East, 6% West.

Soil Type (442 records): 36% loamy, 28% rocky, 21% sandy, 12% gravelly, 2% clayey.

Soil Colour (442 records): 41% brown, 38% grey, 8% orange, 6% black, 4% yellow, 2% red, 0.5% white.

Geology (356 records): 85% sandstone, 15% shale.

Vegetation (442 records): 100% shrubland.



Conservation Status and Threat:

Red Data List Status: Least Concern.

Occurrence (Fynbos): 968 km² with 18% conserved and 1% lost; **Occupancy:** 433 km² with 24% conserved and 1% lost. **Fragmentation index:** 18%.

Nature Reserves (446 records): 29% in nature reserves.

Habitat destruction (443 records): 96% extensive natural habitat, 3% naturally linear habitats, 0.7% islands, 0.2% naturally fragmented habitats.

Alien Invasive Species (427 records): 100% none, 0.2% *Pinus*.

Alien Density (427 records): 100% alien-free, 0.2% sparse.

Cultivation & Utilization:

Picking (310 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Witch's Broom Infestation: 7 records (2%).

Atlassers Notes:

Up to 2 m tall (WIJY0031807);

A very narrow leaf form: 1-2 mm wide - looked like a hermaphroditic *Leucadendron brunioides!* (AGRY1020813+15);

VCH98102202 PO Moth - Red / Black;

With crown swelling-growths resembling fasciation in *L. hypophyllocarpodendron* at Atlantis (AGR96060507+12, AGR96060703); With Witches Broom-type growth (AGR97051818)

Confusing Species: Atlassers often forgot to record the subspecies. Misidentified with *V. amoena*, and when not in flower with *Leucadendron album* and *L. dregei*.

Records of identification queries = 10.

Records of corrected identification queries = 8.

Variation and Taxonomy: Atlassers noted taller plants and narrower leaves than described for the species. However, no geographical variation was noted.

Distribution: Add.

INCLUDEPICTURE

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Vexatorella obtusata ssp. obtusata (Thunb.) Rourke 1803, 1984
Montagu Vexator

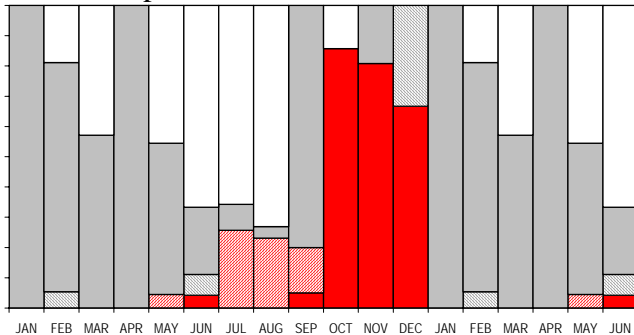
Other Common Names: None known.
Other Scientific Names: *None*.

290 Records

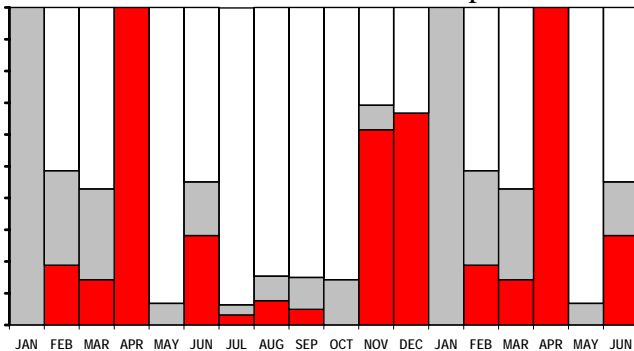
Population (287 records): 19% Common, 63% Frequent, 18% Rare.

Dispersion (262 records): 73% variable, 24% clumped, 3% widespread, 0.4% evenly distributed.

Flowering (287 records with: Jan 2, Feb 37, Mar 7, Apr 1, May 44, Jun 72, Jul 35, Aug 26, Sep 20, Oct 14, Nov 26, Dec 3): Buds from Jul to Aug; Flowering from Oct to Dec; Peak Flowering not noted; Over from Dec; Fruit from Jan to Jun and Sep; Nothing from Mar and May to Aug. Peak levels at 100% in Dec. Historically recorded as flowering from Sep to Dec.



Growth (282 records with: Jan 2, Feb 37, Mar 7, Apr 1, May 44, Jun 71, Jul 31, Aug 26, Sep 20, Oct 14, Nov 26, Dec 3): Much from Apr, Jun and Nov to Dec; Rare from Jan to Mar; None from Feb to Mar and May to Dec. Peak levels at 100% in Jan and Apr.



Seedlings (115 records): Absent in 98%; fewer seedlings than prefire adults in 1 cases. Seedlings found in Jun.

Fire Survival (8 records): 38% survived by seedlings only, 38% resprouted from underground boles, 25% eliminated from the area by fires.

Age to first flowering: First flowers recorded at 1 years, insufficient data to estimate 50%, and 100% recorded at 1 and 5 years.



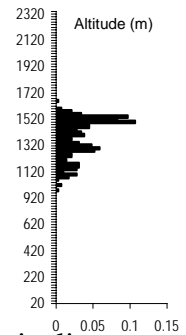
Height (287 records): 57% 0-0.2 m tall, 43% 0.2-1 m tall, 0.3% 1-2 m tall.

Pollinators : No data.

Habitat:

Distance to Ocean (290 records): 100% inland - further than 2 km from coast.

Altitude (290 records): 860 - 1560 m; 1160 *lq* - 1280 *med* - 1400 *uq*m.

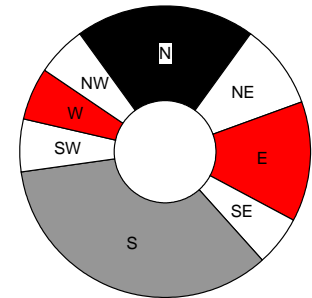


Landform (289 records): 64% deep soil, 33% shallow soil, 3% rocky outcrops.

Slope (288 records): 57% gentle incline, 18% hill top, 17% steep incline, 9% platform.

Aspect (220 records):

41% South, 27% North, 21% East, 12% West.



Soil Type (286 records): 43% sandy, 28% loamy, 13% gravelly, 12% rocky, 4% clayey.

Soil Colour (280 records): 50% brown, 38% grey, 4% white, 4% orange, 3% red, 2% yellow.

Geology (268 records): 85% sandstone, 15% shale, 0.7% silcrete or ferricrete.

Vegetation (288 records): 99% shrubland, 0.7% grassland, 0.3% agricultural lands.

Conservation Status and Threat:

Red Data List Status: Least Concern.

Occurrence (Fynbos): 875 km² with 7% conserved and 2% lost; **Occupancy:** 266 km² with 7% conserved and 2% lost. **Fragmentation index:** 11%.

Nature Reserves (290 records): 9% in nature reserves - inadequately conserved.

Habitat destruction (284 records): 96% extensive natural habitat, 2% naturally linear habitats, 1% naturally fragmented habitats, 0.7% islands.

Alien Invasive Species (287 records): 95% none, 3% *Pinus*, 1% Fabaceae (chiefly alien *Acacia*), 0.7% other aliens.

Alien Density (287 records): 95% alien-free, 4% sparse, 0.3% impenetrable.

Cultivation & Utilization:

Picking (271 records): 100% no sign of picking.

Cultivation Status: No noted cultivation.

Witch's Broom Infestation: 1 record (0.3%).

Atlassers Notes:

One plant over 5 m in diameter

(AGRY2052822);

Perfect centrifugal flowering (SHR97092402);

Interfire recruitment common (PMR99060504);

Confined to Quartzitic outcrops

(AGRY3111914); In sandstone outcrop

(GEDY2082201); In sandy flats

(PMR99060502).

Confusing Species: Confused with *V. obtusata albomontana*.

Records of identification queries = 16

Records of corrected identification queries = 1.

Variation and Taxonomy: None noted.

Distribution: Add.

INCLUDEPICTURE

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