

A new species of orchid from the north-western Cape

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The new species, *Corycium ingeanum* E.G.H. Oliver (Orchidaceae), is described from the Cape Province. It is allied to the common *C. orobanchoides* Sw. and the rare *C. deflexum* H. Bol. from both of which it differs in numerous characters, the most noticeable being the larger more open flowers with striking dark red to black tips to the petals.

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Die nuwe spesie, *Corycium ingeanum* E.G.H. Oliver (Orchidaceae) uit die Kaapprovinsie word beskryf. Dit is naverwant aan die algemene *C. orobanchoides* Sw. en die seldsame *C. deflexum* H. Bol., maar verskil van beide in baie opsigte waaronder die mees opvallend die groter en oper blomme is waarvan die kroonblare treffende donker rooi tot swart punte het.

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Corycium ingeanum E.G.H. Oliver sp. nov.

In genere distinctum affinitatibus proximis *Corycio deflexo* (H. Bol.) Rolfe, sed ab eo praesertim inflorescentia densiore, bracteis subacutis, sepala posteriore oblonga profunde canaliculata, marginibus expansis petalorum, labii appendicibus cornutis recessim in galea projectis, brachiis rostellis erectis ad columnam appressis, stigmatibus ad axem plantae perpendicularibus; aux affinitatibus *Corycio orobanchoide* Sw. sed ab eo inflorescentibus brevioribus, floribus majoribus, galea lata, petalis patentibus, et appendicibus curvatis posteriore projectis cornutis differt.

Herba erecta glabra ad 200 mm alta. *Folia* 7–8, 25–100 × 14–21 mm erecta patentia elongato-lanceolata acuminata basim vaginantes canaliculata. *Inflorescentia* floribus 23–33, c. 80 mm longa et 25–30 mm lata; bracteis erectis 12–14 × 11–12 mm latissime ovatis subacutis margine rufa. *Sepala* lateralia antica conjuncta vel parum libera, lamina late elliptica vel suborbiculata deflexa 7–8 × 6 mm. *Sepalum* adaxiale dorsale oblongum profunde canaliculatum 9 × 4 mm sed aspectu 2 mm latum, obtuso apice incurvo, marginibus involutis. *Petala* c. 10 mm longa 8 mm lata, lutea dimidio distali effuso atrorubenti ateroque, galea ostio late ovato, saccidis duobus posteriore. *Labium* unguiculatum, ascendens; limbo 3 × 1,5 mm prorsum deorsumque arcuata lamina bilobata cuneata 3,5–4 × 5 mm lobis 2–2,5 mm longis effusis obtusis fimbriatis. *Labii appendix* 5–6 mm longa bilobata cornuta; lobis subulatis recavis. *Brachia rostellis* brevia 1,5 mm longa polliniis parallelis ad axem floris, appressis ad columnam; stigmatibus grandibus ellipsoideis pulvinatis posterioribus ad columnam, perpendicularibus ad axem inflorescentiae; appendice extranea linguiformi c. 1 mm longa adaxiali columna insidenti.

TYPUS. — Cape Province: Nieuwoudtville area, Perdekraal on the northern Bokkeveld escarpment, 790 m, August 1983, *Oliver 8050* (BOL, holotypus; K, PRE, isotypi).

An erect glabrous herb up to 200 mm tall with a fairly stout leafy stem. *Leaves* 7–8, erect–spreading, 25–100 × 14–21 mm, elongate, lanceolate, acuminate, broadly sheathing at the base, canaliculate, the upper leaves gradually smaller and appressed. *Inflorescence* loosely to fairly densely 23–33-flowered, c. 80 mm long and 25–30 mm across; flowers erect–spreading, but facing slightly downwards; bracts erect 12–14 × 11–12 mm, very broadly ovate, subacute, minutely papillose ciliate, pale greenish-cream with red margins and membranous apex, distinctly veined, becoming dried and brown. *Lateral sepals* anticous, completely united (or slightly free) into a broadly elliptic or suborbicular deflexed spreading blade 7–8 × 6 mm, emarginate, margins involute, membranous, brownish purple-tipped. *Odd sepal* dorsal, oblong from a narrow base, deeply canaliculate, 9 × 4 mm but appearing only 2 mm broad, arched forwards over the column, obtuse with an incurved apex, the margins folded inwards over and adhering to the petals, yellow soon turning membranous brown. *Petals* c. 10 mm long and 8 mm broad, at first

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forming an ovate to broadly ovate mouth to the flower with a narrow apical portion, soon becoming broadly oblate, yellow with reddish to black spreading tips, each petal forming a short pouch posteriorly. *Lip* unguiculate, ascending and adnate to the column, limb $3 \times 1,5$ mm, fleshy and bright green, arched forwards and downwards beyond the mouth of the flower in a semicircular arc terminating in a much thinner bilobed cuneate blade $3,5-4 \times 5$ mm, lobes $2-2,5$ mm long spreading laterally, obtuse fimbriate, sometimes with a very small third lobe between them. *Lip appendage* $5-6$ mm long, fleshy bilobed, horn-like; lobes subulate, arched backwards inside the flower and slightly divergent, each ending in a pouch of the petals. *Rostellum arms* short, $1,5$ mm long, with the pollinia parallel to the axis of the flower and close to the column; stigmatic surfaces large, ellipsoid cushion-like, posterior to the column and perpendicular to the axis of the inflorescence; an additional small tongue-like appendage c. 1 mm long arising adaxially from the column between and just above the stigmatic cushions and just appearing in the joint of the two lip appendages (Figures 1 & 2).

The genus *Corycium* Sw. according to Stewart *et al.* (1982) has 14 species in southern Africa, 10 of which occur in the south-western Cape Province. All of these were known at the time of Rolfe's treatment of the Orchidaceae in *Flora Capensis* (1913). With the exception of *Corycium venosum* (Lindl.) Rolfe, which was recently (Anthony & Schelpe 1982) trans-

ferred to another genus as *Evota venosa* (Lindl.) Schelpe, there have been no alterations or additions to the genus in this region until now.

Only five of the species are known to occur in the northern part of this region; *C. crispum* Sw. from Namaqualand southwards to the Cape Peninsula, *C. excisum* Lindl. from the Clanwilliam area to the Cape Peninsula and eastwards to the Bredasdorp area, the rare *C. deflexum* (H. Bol.) Rolfe in the Calvinia, Clanwilliam and Sutherland areas and the very common *C. orobanchoides* Sw. from the Vanrhynsdorp area southwards and eastwards to near Swellendam. All of these species possess a protruding lip with a broad bilobed limb. Of these, *C. crispum* and *C. excisum* have lip appendages totally unlike that seen in the material collected near Nieuwoudtville. In *C. crispum* the lip appendage is broadly and laterally recurved, truncate and crenulate, while in *C. excisum* it forms a tall erect keel with forwardly pointing reniform convex lobes.

Stronger similarities exist between the new taxon and *C. orobanchoides* and *C. deflexum*, both of which have been recorded about 80 kilometres from Nieuwoudtville. Differences occur in a number of characters and these are listed in Table 1. The most noticeable feature of the plant in its fresh state is the large distal dark red to black area on each of the two lateral spreading petals which form the broadly open galea. No other species of *Corycium* in the south-western

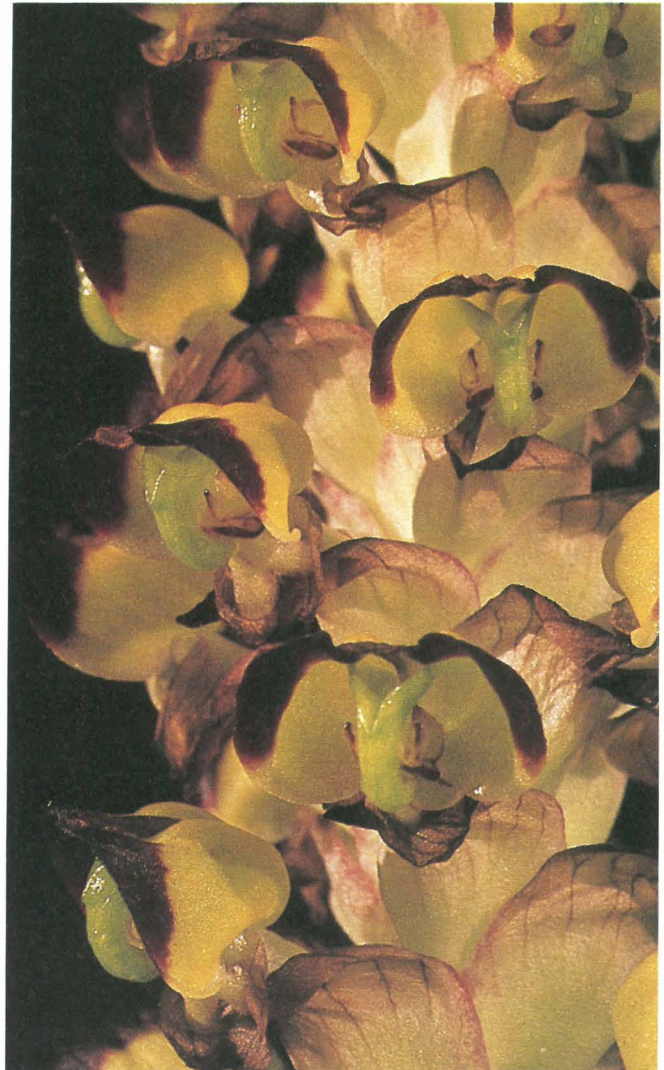
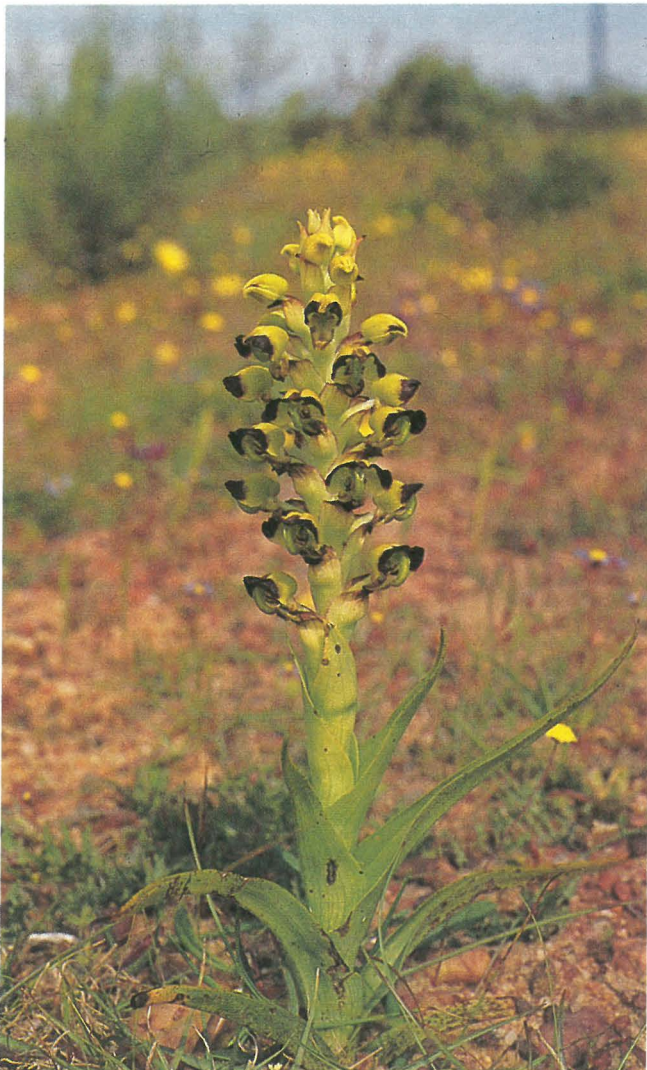


Figure 1 *Corycium ingeanum*. Left, whole plant (Oliver 8050); right, close-up of inflorescence (Oliver 8764).

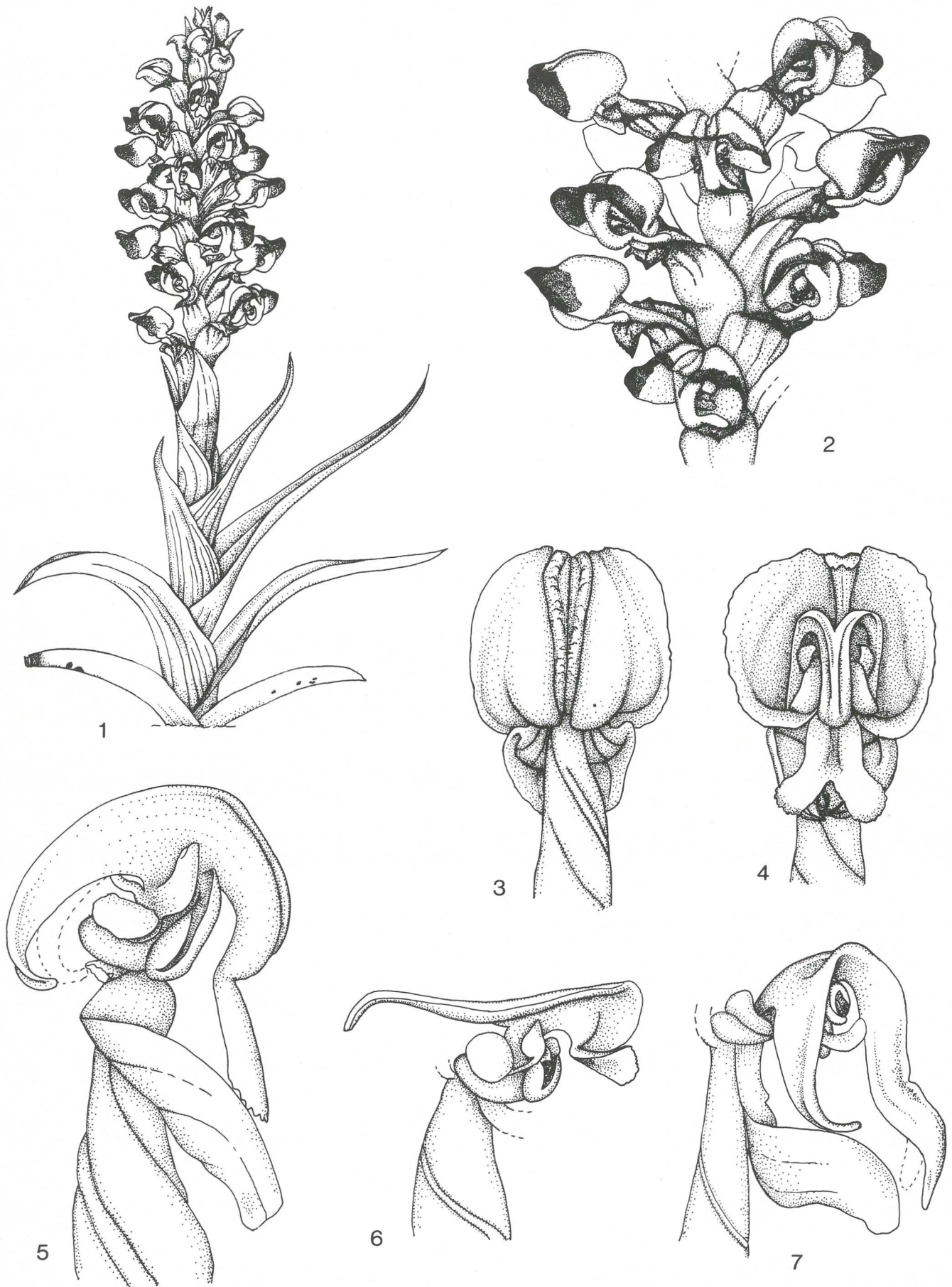


Figure 2 *Corycium ingeanum*: (1) plant, just less than natural size; (2) lower portion of inflorescence, $\times 2$; (3) single flower, rear view, $\times 4$; (4) single flower, front view, $\times 4$; (5) lip and internal structures, side view, $\times 8$. All drawn from the holotype, *Oliver 8050* (BOL). *C. orobanchoides*: (6) lip and internal structures, side view, $\times 8$. Drawn from *Oliver 8774* (STE). *C. deflexum*: (7) lip and internal structures, $\times 8$. Drawn from *Oliver 7849* (BOL).

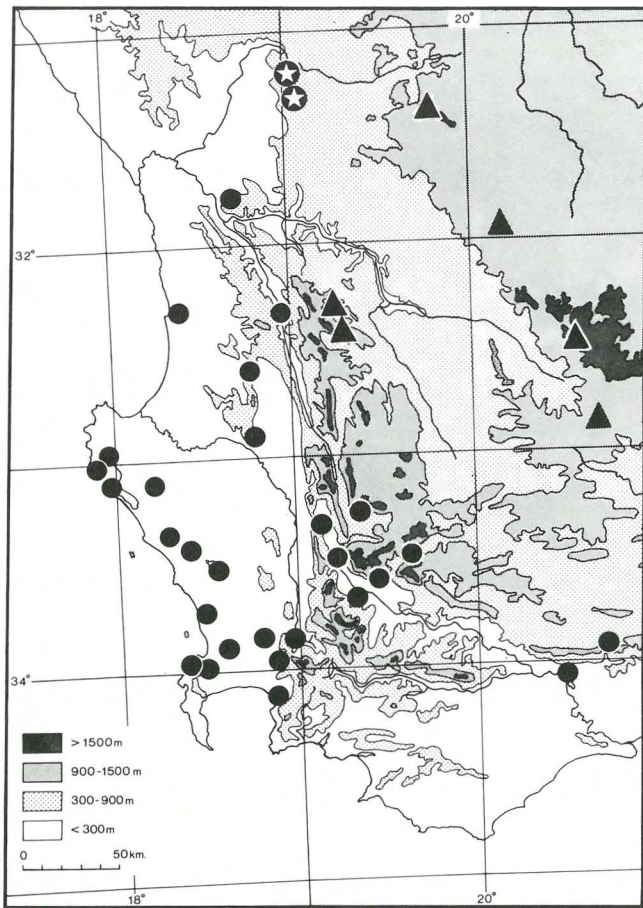


Figure 3 Distribution of *Corycium ingeanum* ★, *C. orobanchoides* ● and *C. deflexum* ▲.

Cape has such an open flower.

At the time of collecting the material I thought, because of the yellow and black flowers and green lip, that I had discovered another locality of the rare *C. deflexum*, which I had collected the previous year near Sutherland. I therefore did not make an exhaustive search for more plants in the area. It was only when I had returned to Stellenbosch and was able to compare colour photographs and also spirit material that I realized that they were different plants.

A subsequent visit to the area in 1984 proved disappointing because the season was very much drier. Even though the 1985 spring season was a good one, no plants could be located in the type locality, but a single plant was found about six kilometres further south on the edge of some wheat fields. A specimen collected as long ago as 1935 by Louisa Bolus and noted as coming from Nieuwoudtville was found filed under *C. orobanchoides* in BOL. In SAM an even older specimen, which was collected by Leipoldt, is unfortunately without any locality, but could well have come from the Nieuwoudtville escarpment because Leipoldt collected in the area.

This species is known only from the northern end of the escarpment north-west of Nieuwoudtville where it appears to be confined to sandy clayey soil in open ground between small shrubs of the renosterbos, *Elytropappus rhinocerotis* (L.f.) Less., and a *Lycium* sp. Here it grows in arid conditions just beyond the northern extension of the fynbos vegetation of the escarpment where the rainfall, up to 400 mm per annum, occurs mainly during the winter months, April to September. From the herbarium records the flowering times of the species can be noted as September for both *C. orobanchoides* and *C. ingeanum* and October for *C. deflexum*.

Table 1 Differentiating characters between *Corycium ingeanum*, *C. deflexum* and *C. orobanchoides*

	<i>C. ingeanum</i>	<i>C. deflexum</i>	<i>C. orobanchoides</i>
Inflorescence	fairly densely arranged	loosely arranged	very densely arranged
Bracts	broadly ovate, subacute; red margin distinct & clearly visible due to less clasping nature	ovate, acute to acuminate; red margin very slight & not visible due to the clasping nature	broadly ovate, subacute; no red margin; slightly clasping
Flowers	broader than long; not scented or with very faint sweet scent	broader than long; strongly & unpleasantly sweetly scented	longer than broad; very strongly & very unpleasantly sweetly scented
Flower colour	posterior sepal greenish-yellow all over & soon drying pale brown all over; petals yellow with striking deep reddish to black tips	posterior sepal greenish-cream with dark reddish tips; petals yellow all over	posterior sepal greenish-cream, half soon turning brown; petals yellow-green with maroon-red tips
Posterior sepal	oblong, deeply canaliculate with obtuse apex	obcuneate, convex to flattened above with broad apex	oblong, deeply canaliculate with obtuse apex
Lateral sepals	pushed downwards by lip	pushed downwards by lip	appressed to underside of flower
Petals	spreading forwards & outwards with slightly revolute leading edge	with involute leading edge	elongate with slightly revolute leading edge
Lip	projecting forwards & downwards in an arc; lobes tucked away underneath & less visible	projecting downwards in a straighter arc; lobes projecting outwards & more visible	projecting forwards then abruptly backwards with lobes abruptly forwards (Z-like); lobes placed in mouth of galea
Lip appendage	horns projecting backwards & downwards in an arc into pouches	horns projecting laterally & downwards in an arc & curled under pollinia	horns projecting horizontally backwards into pouches & with deflexed apices
Arms of rostellum	erect & appressed to column	perpendicular to column	erect & appressed to column
Stigmatic surfaces	posterior to column & perpendicular to axis of plant	anterior to column & tangential to axis of plant	posterior to column & tangential to axis of plant

At the time of collecting the type material no obvious scent or odour was noted. In the most recent collection there was also no noticeable scent. This contrasts strongly with the other two species. *C. orobanchoides* is noted for its very strong acrid sweet scent which is regarded as unpleasant by many people. Schelpe records on his collection of *C. deflexum* that the flowers were strongly and unpleasantly scented.

The species is named after my wife with whom I collected the species and who made the accompanying drawings.

Specimens examined

Corycium ingeanum

— **3119** (Calvinia): Perdekraal north-west of Nieuwoudtville (–AA), *Oliver 8050* (BOL, holo., K, PRE); Ou Plaas (–AA), *Oliver 8764* (STE); Nieuwoudtville (–?AC), *L. Bolus in BOL 19575* (BOL).

Without locality: *Leipoldt 923* (SAM).

Corycium deflexum

— **3119** (Calvinia): Hantamsberg, Calvinia (–BD), *Schelpe 8088* (BOL, NBG).

— **3219** (Wuppertal): Koudeberg near Wuppertal (–AA/AB), *Bolus 8660* (BOL, holo.); Wuppertal (–AB), *Leipoldt in SAM 3402* (SAM); Matjiesrivier (–AD), *Wagener 229* (NBG).

— **3120** (Williston): Middelpoos, farm Bloemfontein (–CC), *Perry 3054* (NBG).

— **3220** (Sutherland): Jakkalsvlei, Sutherland (–BC), *Marloth 9652* (STE); Smoushoogte in Klein Roggeveldberge (–DC), *Oliver 7849* (BOL, STE).

Corycium orobanchoides

— **3118** (Vanrhynsdorp): Gifberg (–DC), *Phillips s.n.* (BOL, SAM).

— **3217** (Vredenburg): Witklip, Vredenburg (–DD), *Thompson 59* (NBG).

— **3218** (Clanwilliam): Elandsbaai (–AD), *Williamson 2766* (BOL); Citrusdal to Clanwilliam (–BD), *Thorne in SAM 52686* (SAM);

Het Kruis (–DA/DB), *Compton 15031* (NBG); Piquetberg (–DD), *Lewis in BOL 22241* (BOL); *Wilman 854* (BOL); *L.E. Taylor 3902* (STE).

— **3317** (Saldanha): Danger Bay (–BB), *H. Hall 734* (NBG); Postberg to Donkergat (–BB), *Rourke 584* (NBG).

— **3318** (Cape Town): Langebaan (–AA), *Lewis s.n.* (BOL); Hopefield (–AB), *Lewis 1486* (SAM); Mamre/Darling (–AD), *Leighton 2122* (BOL); Darling Flora Reserve (–AD), *Lewis 5050* (NBG); Contreberg (–AD), *Pillans 6893* (BOL); Klipfontein, Malmesbury (–BC), *van Zyl 3236* (STE); Kenilworth (–CD), *Bolus 3935* (BOL); Kirstenbosch (–CD), *Compton s.n.* (BOL); Camp Ground (–CD), *Pillans 3501* (BOL); Camps Bay (–CD), *Thode 6099 & 7991* (STE); Pella (–DA), *Boucher 4748* (STE); *Linder 1144* (BOL); Tygerberg (–DC), *Bolus s.n.* (BOL); Kuilsrivier (–DC), *Oliver 3693 & 4758* (STE); Voëltjiesdorp, Stellenbosch (–DD), *Boucher 3945Z* (STE); Blaauwklip (–DD), *Gillett 592* (STE); Simondium (–DD), *Marsh 947* (STE); Die Boord, Stellenbosch (–DD), *Oliver 8774* (BOL, K, MO, PRE, S, STE); Hercules Pillar (–DD), *Schelpe s.n.* (BOL).

— **3319** (Worcester): Tulbagh (–AC), *Fellingham 205* (STE); *Grant 2436* (BOL); Romansrivier (–AC), *Linder 1238* (BOL); *Middlemost 1716* (BOL, NBG, STE); Prince Alfred Hamlet (–AC), *Oliver 5054* (STE); Hex River valley (–BC), *Tyson 641* (SAM); Rawsonville (–CB), *A.V. Hall 1042* (BOL); *Walters 506* (BOL); Karoo Gardens (–CB), *Perry 500* (NBG).

— **3320** (Montagu): Barrydale (–DC), *Giffen 63a* (BOL).

— **3418** (Simonstown): Strand (–BB), *Schelpe 4898* (BOL).

— **3420** (Bredasdorp): Bontebok Park (–AB), *Liebenberg 6408* (STE).

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