

AMARYLLIDACEAE

A NEW VARIETY IN THE GENUS *CLIVIA*

The current classification for *Clivia* Lindl., a genus endemic to southern Africa, recognizes five species of which only one is infraspecifically divided into varieties (Duncan 1999; Rourke 2002; Snijman & Archer 2003; Swanevelder 2003). A still undescribed sixth species from the Pondoland Centre of Endemism (Van Wyk &

Smith 2001) is currently under investigation (Swanevelder 2003). *Clivia miniata* (Lindl.) Regel var. *citrina* Watson was discovered in the latter part of the 19th century and, on the basis of its yellow flowers, described by W. Watson as a variety in 1899 (Watson 1899; Phillips 1931; Duncan 1985, 1992). Strictly speaking the rank of



FIGURE 5.—Distribution of *C. gardenii* var. *gardenii*, ●, and *C. gardenii* var. *citrina* as well as the typical variety, ■.

forma should have been used for the sporadic occurrence of the single colour mutation to which this variety name applies (Stuessy 1990). Here we formally describe a distinct yellow-flowered form of *Clivia gardenii* Hook. Following the precedent set in *Clivia miniata*, we have decided to recognize the new infraspecific taxon at variety level. For a complete description of *C. gardenii*, see Hooker (1856).

***Clivia gardenii* Hook. var. *citrina* Z.H.Swanevel-der, A.E.van Wyk & J.T.Truter, var. nov., floribus pallide luteis vel citrinis, non aurantiacis vel rubris ut in varietate typico distinguitur.**

TYPE.—KwaZulu-Natal, 2731 (Louwsburg): Ngome Forest, (–CD), Swanevel-der & Truter ZH10 (PRU, holo.).

Flowers pale yellow or lemon yellow, not orange or red as in the typical variety.

The holotype of *C. gardenii* var. *citrina* was collected in Ngome Forest (Ngotshe District, KwaZulu-Natal) on 22 June 2002. Visits to the forest confirmed previous reports of a strong population of lemon- or pale yellow-flowered *C. gardenii*, with the occasional pastel or orange-flowered individual, at this locality. This stands in contrast to the single yellow-flowered specimen of *Clivia miniata* that was available when the variety *citrina* was described. We therefore consider the establishment of a new yellow-flowered variety in *Clivia gardenii* as fully justified.

In *C. gardenii* var. *gardenii* the flowers are various shades of orange and red (Obermeyer 1972). We treat all plants with flowers in shades of these two colours (at the time of anthesis), as belonging to this variety. *Clivia gardenii*, as defined by Swanevel-der (2003), is confined to two disjunct areas in KwaZulu-Natal (Figure 5). Plants from southern KwaZulu-Natal and adjacent parts of Eastern Cape traditionally identified as *C. gardenii* are now regarded as a new taxon and have been excluded from the distribution of *C. gardenii* (Swanevel-der 2003).

The main distribution range of *C. gardenii* extends from Durban northwards to Empangeni and inland as far as Kranskop, Greytown and Howick. A second outlier distribution area is located in the Ngome Forest between Vryheid and Nongoma, and slightly further north. No linking records were found between these two distribution areas.

Ngome Forest is part of the Ntendeka Wilderness Area and the yellow-flowered plants are all confined to this protected area. The population is healthy with a high percentage of plants producing flowers and seed. Hopefully the relative inaccessibility of the plants would ensure the survival of the population as it provides some protection against illegal plant collecting. The conservation status of the new variety on Table Mountain near Pietermaritzburg is unknown as no additional herbarium specimens of this taxon have been collected from there since 1949.

Additional material examined

KWAZULU-NATAL.—2731 (Louwsburg): Ngome Forest, south-facing gully about 100 m east of campsite, (–CD), June 1999, Rourke 2157 (NBG). 2930 (Pietermaritzburg): Table Mountain, Amatulu Forest, (–DA), 28-05-1949, Killick 466 (PRE, NH).

ACKNOWLEDGEMENTS

Our thanks to Dr Hugh Glen for the Latin translation of the diagnosis and to Ezemvelo KwaZulu-Natal Wildlife for the necessary permit to collect the type specimen. The South African National Biodiversity Institute is thanked for the use of data from the National Herbarium, Pretoria (PRE) Computerized Information System (PRECIS).

REFERENCES

- DUNCAN, G. 1985. Notes of the genus *Clivia* Lindley with particular reference to *C. miniata* Regel var. *citrina* Watson. *Veld & Flora* 71: 84, 85.
- DUNCAN, G. 1992. Notes of the genus *Clivia* Lindley with particular reference to *C. miniata* Regel var. *citrina* Watson. *Herbertia* 48: 26–29.
- DUNCAN, G. 1999. *Grow clivias*. In D. Snijman & C. Voget, Kirstenbosch Gardening Series. National Botanical Institute, Cape Town.
- HOOKE, W.J. 1856. *Clivia gardenii*. *Curtis's Botanical Magazine*, ser. 3, 12: t. 4895.
- OBERMEYER, A.A. 1972. *Clivia gardenii*. *The Flowering Plants of Africa* 42: t. 1641.
- PHILLIPS, E.P. 1931. *Clivia miniata* var. *flava*. *The Flowering Plants of South Africa* 11: t. 411.
- ROURKE, J.P. 2002. *Clivia mirabilis* (Amaryllidaceae: Haemantheae) a new species from Northern Cape, South Africa. *Bothalia* 32: 1–7.
- SNIJMAN, D.A. & ARCHER, R.H. 2003. *Clivia*. In G. Germishuizen & N.L. Meyer, Plants of southern Africa: an annotated checklist. *Strelitzia* 14: 958, 959. National Botanical Institute, Pretoria.
- STUESSY, T.F. 1990. *Plant taxonomy. The systematic evaluation of comparative data*. Columbia University Press, New York.
- SWANEVELDER, Z.H. 2003. *Diversity and population structure of Clivia miniata* Lindl. (Amaryllidaceae): evidence from molecular genetics and ecology. M.Sc. thesis, University of Pretoria, Pretoria.
- VAN WYK, A.E. & SMITH, G.F. 2001. *Regions of floristic endemism in southern Africa: a review with emphasis on succulents*. Umdaus Press, Pretoria.
- WATSON, W. 1899. *Clivia miniata* var. *citrina*. *The Garden* 56: 388, t. 1246.

Z.H. SWANEVELDER*, A.E. VAN WYK** and J.T. TRUTER***

* Department of Botany/Forestry and Agricultural Biotechnology Institute (FABI), University of Pretoria, 0002 Pretoria.

** H.G.W.J. Schweickerd Herbarium, Department of Botany, University of Pretoria, 0002 Pretoria.

*** P.O. Box 5085, 1502 Benoni South, South Africa.

MS. received: 2004-03-06.